Pennsylvania Chapter 94 Compliance:
Municipal Wasteload Management Report

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

January 1, 2012 through December 31, 2012

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 2013

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 28, 2013

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

Dear Mr. Spontack:

On behalf of the York City Sewer Authority, please find the enclosed two copies of the 2012 Municipal Wasteload Management Report for the areas tributary to the York City Wastewater Treatment Plant (NPDES PA0026263). Maps are submitted separately.

This annual report is submitted as required under Pennsylvania Code Title 25 Environmental Resources Chapter 94 Municipal Wasteload Management. Questions may be directed to Veronica Whaley Chavez at 717-854-0358, or vwhaley@yorkcity.org.

Report Preparer:

Respectfully,

Veronica Whaley Chavez
Pretreatment Permit & Compliance Manager

Permittee:

Respectfully,

James E. Gross
Vice-Chairperson, York City Sewer Authority

Enclosures

c: file

Contents

Contents i
Appendices ii
Attachments ii
Tables iii
Exhibits iii
Figures iii
Summary iv
1. Current Loadings 1
1.1. Existing Facilities 1
1.2. Existing Hydraulic Loadings 1
1.3. Existing Organic Loadings 6
2. Projected Loadings §94.12(A)(1), (2)&(3) 7
2.1. Anticipated Hydraulic Loading 7
2.2. Hydraulic Loading Projection 8
2.3. Organic Loading Projection 9
3. Sewer System Monitoring, Maintenance, Repair and Rehabilitation §94.12(a)(5), (6) & (7), in part 15
4. Conveyance Capacity §94.12(a)(6), in part 17
4.1. Act 537 Plan Updates 17
4.2. Identified Potential Conveyance Capacity Exceedance 17
4.3. Prevented or Corrected Conveyance Capacity Exceedance 18
5. Quality Assurance of Effluent Monitoring §94.12(a)(5), in part 23
5.1. Sampling 23
5.2. Analysis 23
5.3. Quality Control Samples 25
5.4. Other Laboratory Techniques 26
5.5. Quality Assurance Practices 27
6. Plant Performance 29
7. Municipal Industrial Pretreatment Program §94.12 (a)(8) 39
7.1. Purpose of the Municipal Industrial Pretreatment Program 39
7.2. Reporting Requirements 39
7.3. Pretreatment Performance Summary 40
7.4. Section I, General Information Attachments 41
7.5. Section II, Compliance Monitoring Program Attachments 43
7.6. Section III, Significant Industrial User Compliance Attachments 45
7.7. Section IV, Enforcement Actions Attachments 47
7.8. Part B: Pretreatment Developments 53
7.8.1. Summary of POTW Operations 53
7.8.2. Trucked or Hauled Wastewater 58
7.8.3. Pretreatment Program Changes 58
7.8.4. Miscellaneous Developments 59

Appendices

Appendix A	Manchester Township Chapter 94 Municipal Wasteload Management
Appendix B	North York Borough Chapter 94 Municipal Wasteload Management
Appendix C	Spring Garden Township Chapter 94 Municipal Wasteload Management
Appendix D	Springettsbury Township Chapter 94 Municipal Wasteload Management*
Appendix E	West Manchester Township Chapter 94 Municipal Wasteload Management
Appendix F	West York Borough Chapter 94 Municipal Wasteload Management
Appendix G	City of York Chapter 94 Municipal Wasteload Management
Appendix H	York Township Chapter 94 Municipal Wasteload Management Report
Appendix I	York City Wastewater Treatment Facility Influent Meter Certifications of Calibration
Appendix J	York City WWTP NPDES Quarterly Local Limits Analyses, Annual Priority Pollutant Scan, Semimonthly Sludge Results
Appendix K	PADEP Correspondence

Attachments

Map plans from contributing municipalities for constructed sewer extensions, proposed sewer extensions and projects requiring public sewer (§94.12(a)(4)) are attached and are part of this document. As there are no blocks of developable property in North York Borough, and any isolated future connections are unknown at this time, maps for North York Borough are not attached.

Tables

Table 1-1: Hydraulic and Organic Loading Allocations Under Intermunicipal Agreements 2
Table 1-2: PADEP Sewer Modules and Module Exemptions, 2012 2
Table 1-3: Hydraulic Loading, 2012 3
Table 1-4: Comparison of 2012 Monthly and Annual Precipitation Data, and Historic Precipitation Records 4
Table 1-5: Monthly and Annual Average Influent Biochemical Oxygen Demand and Total Suspended Solids Loadings, 2012 6
Table 2-1:Anticipated Municipal Annual Flow Increases, 2013-2017 (gpd) 7
Table 2-2: 2012 Metered Flows and Anticipated Municipal Annual Flows (gpd) 8
Table 2-3: Flow Allocations, Current Flows and Anticipated Flows (gpd) 8
Table 2-4: 2008-2012 Historic Flows (mgd) 11
Table 2-5: Hydraulic Loading Projection (mgd) 11
Table 2-6: 2008-2012 Historic Organic Loading (lbs/day) 13
Table 2-7: Organic Loading Projection (lbs/day) 13
Table 5-1: Number of Treatment Plant Samples Analyzed per Week, by Analyte 24
Table 5-2: Number of Industrial Samples Analyzed per Year, by Analyte 24
Table 5-3: Reference Methods for Each Analysis 25
Table 6-1: NPDES Permit Effluent Limitations 29
Table 6-2: Dissolved Oxygen, Fecal Coliform and pH Effluent Concentrations, 2012 30
Table 6-3: Biochemical Oxygen Demand Effluent Concentration and Loading, 2012 31
Table 6-4: Total Suspended Solids Concentration and Loading, 2012 32
Table 6-5: Phosphorus Effluent Concentration and Loading, 2012 33
Table 6-6: Ammonia-Nitrogen Effluent Concentration and Loading, 2012 34
Table 6-7: Annual Net Nitrogen and Phosphorus Loading, October 2011 to September 2012 35
Table 6-8:Comparison of Local Limit Influent Data, 2010-2012 36
Table 6-9:Comparison of Local Limit Effluent Data, 2010-2012 37
Table 6-10: Comparison of Local Limit Biosolids Data, 2010-2012 38
Table 7-1: Categorical and Significant Noncategorical Industrial Users, 2012 42
Table 7-2: Compliance Monitoring Summary, 2012 44
Table 7-3 Significant Industrial Users in SNC During 2012 45
Table 7-4: Enforcement Actions Summary, 2012 49
Table 7-5: Priority Pollutant Influent Goals Data Summary, 2012* 54
Table 7-6: Priority Pollutant Effluent Goals Data Summary, 2012 56
Table 7-7: Priority Pollutant Biosolids Goal Data Summary, 2012 57

Exhibits

Exhibit 7-1: Significant Non-Compliance Newspaper Notice 46
Exhibit 7-2: Frito Lay Administrative Compliance Order 50

Figures

Figure 1-1: Influent Flow Frequency, 2012 5
Figure 2-1: Hydraulic Loading, 2008-2017 (2013-2017 Projected) 10
Figure 2-2: Organic Loading, 2008-2017 (2013-2017 Projected) 12

Summary

This report is submitted to the Pennsylvania Department of Environmental Protection (PADEP) in compliance with Pennsylvania Code Title 25 Environmental Resources Chapter 94 Municipal Wasteload Management. The purpose of the Chapter 94 Municipal Wasteload Management legislation is to reduce and prevent pollution associated with sanitary sewer facilities (collection, conveyance and treatment) through proactive monitoring, assessment, planning, and management of hydraulic, organic, and industrial waste loadings. The plan is updated annually and includes data for a five-year planning horizon.

This report covers the area served by the York City Wastewater Treatment Plant (NPDES PA0026263) located in York County, Pennsylvania. This facility serves North York Borough, West York Borough, York City, and portions of Manchester, Spring Garden, West Manchester and York Townships. The facility outfall is located at 39°59'19"N, 76°43'27"W, which discharges to the Codorus Creek. A portion of the flow collected by the Springettsbury Township system can be routed to the York City Wastewater Treatment Plant.

This report evaluates sewage facility performance in relation to permitted capacity. Current loadings are reviewed, hydraulic and organic loadings are projected, and potential or actual interceptor overload and infiltration/inflow problems are summarized. Effluent monitoring methods and municipal industrial pretreatment program activities are documented. Each contributing municipality's sewer collection and conveyance system report is attached as an appendix. Maps showing proposed projects and sewer extensions within the service area are submitted separately and are part of this document.

The York City Wastewater Treatment Plant met all permit requirements in 2012 with three exceptions. On August 6, 2012 the Train 2 effluent screw pumps and sand filter system lost power and the recirculation pumps in Train 3 malfunctioned, and on August 7, 2012 the treatment plant discharged partially treated sewage due to loss of electrical power to the ultra-violet light disinfection system. PADEP issued a violation letter for the August 2012 events. During the fifth week of October 2012, the maximum average weekly total suspended solids (TSS) limit was exceeded due to Tropical Storm Sandy.

The York City Wastewater Treatment Plant, permitted for a 26.0 mgd average monthly flow and a BOD of 62,884 lbs/day, is not projected to be overloaded either hydraulically or organically over the five-year planning horizon (2017). In the year 2017 the projected average flow is 12.921 mgd and the projected average BOD loading is 26,708 lbs/day. The projected three-month maximum flow is 15.292 mgd and the one-month maximum BOD loading is 32,157 lbs/day.

1. Current Loadings

1.1. Existing Facilities

The York City Wastewater Treatment Plant provides tertiary wastewater treatment for North York Borough, West York Borough, York City and portions of Manchester, Spring Garden, West Manchester and York Townships within York County, Pennsylvania. The plant operates under National Pollution Discharge Elimination System (NPDES) permit PA0026263 issued to the York City Sewer Authority.

The York City Sewer Authority, owner, leases the plant and entire sewer works to the City of York, which is responsible for their operation. Each municipality tributary to the York City Wastewater Treatment Plant owns and operates its own collection and conveyance facilities and is responsible for their maintenance and repair. The entire sanitary service area connected to the York City Wastewater Treatment Plant is comprised of 21 pump stations and over 322 miles of sewer collection and conveyance lines.

The treatment plant is permitted for an average monthly flow of 26.0 million gallons per day (mgd) and an organic capacity of 62,884 pounds per day (lbs/day). Wastewater is treated through various physical and biological processes. After debris and grit are removed by bar screens and degritters, wastewater is directed to two parallel biological nutrient reduction treatment processes where a combination of clarifiers and oxygen activated or anaerobic/oxic (A/O) activated sludge reactors provide treatment. Wastewater from these two parallel processes is combined for processing through gravity sand filters, and is then disinfected by an ultraviolet light disinfection system and discharged to the Codorus Creek at outfall 002 *via* an aerating cascade. A high level of wastewater treatment is attained by these processes, and includes nitrification, biological phosphate removal, and a high level of biochemical oxygen demand (BOD) reduction. Digested and dewatered biosolids, extracted from the wastewater treatment process, are disposed under contract and are used for land application. Micro-turbines convert waste methane gas into power and heat: this system is expected to produce 2.5 million kWh per year while significantly reducing NOx, SOx, and CO2 emissions over the older co-generation system it replaced. An Ostara nutrient recovery process extracts materials from the anaerobic digesters and creates a slow-release, phosphorus-rich fertilizer, which is packaged and removed from site for wholesale distribution.

1.2. Existing Hydraulic Loadings

The permitted hydraulic loading discharge of 26.0 mgd is distributed to each municipality under intermunicipal agreements executed between the City of York and each affected municipality (Table 1-1). In 2012, sixteen sewage facility planning modules or module exemptions[1] for new land development, accounting for 113,380 gallons per day (gpd), were submitted to the Pennsylvania Department of Environmental Protection (PADEP) by municipalities tributary to the York City Wastewater Treatment Plant (Table 1-2). Only '3' and '3e' modules, which reflect projects utilizing public sewerage systems, are presented in Table 1-2. The sewer planning modules and module exemptions, required under the Pennsylvania Sewage Facilities Act, assure adequate sewage facilities are available to serve proposed developments for a five-year planning horizon.

[1] In 2011, six sewage planning modules or exemptions were submitted to PADEP accounting for 6,550 gallons per day.

Table 1-1: Hydraulic and Organic Loading Allocations Under Intermunicipal Agreements
York City Wastewater Treatment Plant

Municipality	Hydraulic Allocation (gpd)	Organic Loading Allocation[1] (lbs/day)
Manchester Township	2,434,900	5,892
North York Borough	531,200	1,285
Spring Garden Township	3,011,500	7,282
Springettsbury Township	4,000,000	9,674
West Manchester Township	3,378,800	8,170
West York Borough	1,200,500	2,905
York City[2]	8,080,100	19,542
York Township	3,363,000	8,134
Total	26,000,000	62,884

[1] - Based on a BOD concentration of 290 mg/l.
[2] - York City determined by subtraction.

Table 1-2: PADEP Sewer Modules and Module Exemptions, 2012
York City Wastewater Treatment Plant

Municipality	Land Use		Number of Modules	Total Flow (gpd)
	Residential (gpd)	Non-Residential (gpd)		
Manchester Township	0	0	0	0
North York Borough	11,900	0	1	11,900
Spring Garden Township	1,550	360	3	1,910
West Manchester Township	0	350	1	350
West York Borough	0	0	0	0
York City	26,600	7,320	8	33,920
York Township	49,700	15,600	3	65,300
Total	89,750	23,630	16	113,380

The treatment plant average daily influent flow was 10.163 mgd in 2012 (Table 1-3). The treatment facility is designed for an average daily flow of 26.0 mgd, and a peak flow of 67.5 mgd. The maximum average daily flow reached 47.889 mgd on October 30, 2012 after a 5.11-inch rain event on October 29, 2012 with another 0.96 inches falling on October 30, 2012. A total of 6.26 inches of rain fell over the October 28-31, 2012 period. Monthly precipitation data are presented in Table 1-4.

Table 1-3: Hydraulic Loading, 2012
York City Wastewater Treatment Plant

Month	Average Daily Influent Flow (mgd)
January	11.224
February	9.560
March	9.134
April	8.521
May	9.473
June	9.654
July	9.409
August	10.095
September	10.629
October	12.915
November	11.782
December	9.520
Annual Average Flow	10.163

Note: Maximum average daily flow of 47.889 mgd occurred October 30, 2012.

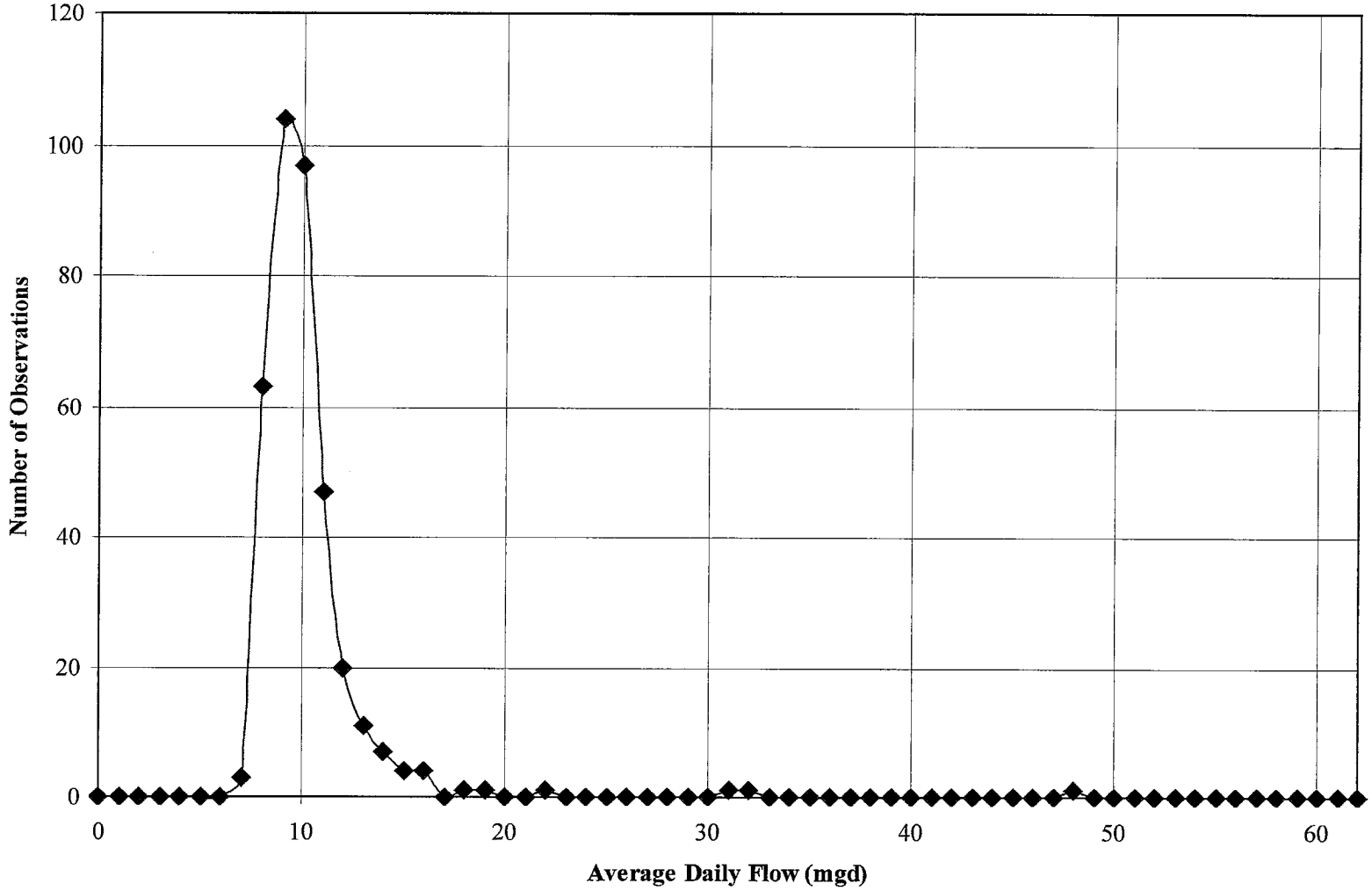
Treatment plant influent flow frequencies are displayed in Figure 1-1. Average daily flows, rounded to the nearest million gallons per day, are plotted against their frequency of occurrence in days. The most frequent average daily flow in 2012 was 9 mgd with 104 observations

Table 1-4: Comparison of 2012 Monthly and Annual Precipitation Data, and Historic Precipitation Records

Month	Precipitation (inches)	Normal[1] (inches)	Departure from Normal (inches)
January	2.86	3.44	-0.58
February	1.93	2.77	-0.84
March	1.30	3.65	-2.35
April	2.70	3.52	-0.82
May	4.20	4.26	-0.06
June	3.06	4.31	-1.25
July	4.82	3.75	1.07
August	5.04	3.33	1.71
September	5.94	4.10	1.84
October	8.71	3.16	5.55
November	1.00	3.47	-2.47
December	3.11	3.24	-0.13
2012 Total	44.67	43.00	1.67
2011 Total	61.47	43.00	18.47
2010 Total	40.27	43.00	-2.73
2009 Total	34.70	43.00	-8.30
2008 Total	49.97	43.00	6.97
2007 Total	41.16	43.00	-1.84
2006 Total	39.62	43.00	-3.38
2005 Total	43.16	43.00	0.16
2004 Total	57.32	43.00	14.32
2003 Total	57.29	43.00	14.29
2002 Total	43.67	43.00	0.67

[1] - Where 'normal' is the arithmetic average precipitation from 1971 to 2000.
Sources: NOAA. 2011. Annual Climatological Summary. National Climatic Data Center. Asheville, NC. weather station index #369933, York 3 SSW pumping station, Route 182 (390 feet AMSL).
City of York. 2012. City of York WWTP Monthly Monitoring Report Supplemental Forms (SBC).

Figure 1-1: Influent Flow Frequency, 2012
York City Wastewater Treatment Plant



1.3. Existing Organic Loadings

The total permitted organic loading of 62,884 lbs/day of BOD is allocated under intermunicipal agreement based on a BOD concentration of 290 mg/l (Table 1-1). Monthly average, annual average, and monthly maximum biochemical oxygen demand and suspended solids loadings for 2012 are displayed in Table 1-5. The 2012 annual average organic loading was 21,415 lbs/day, with an average equivalent concentration of 261 mg/l. The 2012 annual average total suspended solids loading was 21,626 lbs/day (263 mg/l).

Table 1-5: Monthly and Annual Average Influent Biochemical Oxygen Demand and Total Suspended Solids Loadings, 2012
York City Wastewater Treatment Plant

Month	Biochemical Oxygen Demand 5			Total Suspended Solids		
	Monthly Average (mg/l)	Monthly Average (lbs/day)	Monthly Maximum (lbs/day)	Monthly Average (mg/l)	Monthly Average (lbs/day)	Monthly Maximum (lbs/day)
January	256	23,688	43,756	259	23,931	48,498
February	313	24,885	40,574	317	25,177	49,992
March	303	22,837	31,130	324	24,275	36,966
April	300	21,054	29,278	294	20,530	31,905
May	300	23,708	31,752	327	25,977	45,733
June	259	20,675	27,486	240	19,073	33,489
July	247	19,030	25,958	226	17,599	24,380
August	241	20,166	26,106	235	19,795	34,289
September	221	18,995	29,479	226	19,189	33,052
October	218	21,098	56,897	227	23,472	88,566
November	225	21,017	34,677	228	21,175	39,547
December	257	19,964	32,226	249	19,338	46,028
Average	261	21,415	N/A	263	21,626	N/A

2. *Projected Loadings §94.12(A)(1), (2)&(3)*

2.1. Anticipated Hydraulic Loading

Expected annual flow increases for each municipality are presented in Table 2-1. The cumulative anticipated flow over the next five years is an additional 1,915,475 gpd. Estimates of future wastewater contributions were derived by tabulating expected connections per year from each municipality's wasteload management information located in Appendices A through H.

Table 2-1:Anticipated Municipal Annual Flow Increases, 2013-2017 (gpd)
York City Wastewater Treatment Plant

Municipality	Year					Five Year Total
	2013	2014	2015	2016	2017	(2013-2017)
Manchester Twp	44,438	50,972	130,530	72,510	57,800	356,250
N York Borough	1,050	1,050	1,050	1,050	1,050	5,250
Spring Garden Twp	142,263	159,500	90,450	110,950	63,900	567,063
Springettsbury Twp	0	0	0	0	0	0
W Manchester Twp	10,400	25,700	31,500	69,000	27,500	164,100
W York Borough	48,747	2,100	2,100	2,100	2,100	57,147
York City	34,470	42,670	26,325	21,150	1,400	126,015
York Twp	77,100	206,550	81,700	72,950	201,350	639,650
Total	358,468	488,542	363,655	349,710	355,100	1,915,475
Cumulative Total		847,010	1,210,665	1,560,375	1,915,475	

Source: Municipal tabulations of available sewer capacity reserves exhibits located in Appendices A through H.

Estimates of current and anticipated annual flows through 2017 are shown in Table 2-2. An average flow of 12,078,494 gpd is estimated for 2017[2] based on 2012 annual average flows for each municipality. Estimates of 2012 wastewater contributions of the outlying municipalities were obtained from analysis of nine sewage flow meters and flow estimates of un-metered service areas. These flows are subtracted from the flow metered at the treatment plant to determine York City contributions. Expected annual flow increases for each of the next five years were cumulatively added to the current annual average flow to derive total expected flows in 2017. Table 2-3 shows hydraulic allocation use by municipality over the five-year planning period.

[2] More accurate projected flows are located in Table 2-4, which are calculated using a five-year annual average flows to which anticipated flows are added. The figures in Table 2-4 should be used for planning purposes.

Table 2-2: 2012 Metered Flows and Anticipated Municipal Annual Flows (gpd)
York City Wastewater Treatment Plant

Municipality	Average Flow 2012	Year				
		2013	2014	2015	2016	2017
Manchester Twp	932,918	977,356	1,028,328	1,158,858	1,231,368	1,289,168
N York Borough	178,529	179,579	180,629	181,679	182,729	183,779
Spring Garden Twp	1,681,513	1,823,776	1,983,276	2,073,726	2,184,676	2,248,576
Springettsbury Twp	258,978	258,978	258,978	258,978	258,978	258,978
W Manchester Twp	2,178,513	2,188,913	2,214,613	2,246,113	2,315,113	2,342,613
W York Borough	553,992	602,739	604,839	606,939	609,039	611,139
York City[1]	2,944,207	2,978,677	3,021,347	3,047,672	3,068,822	3,070,222
York Twp	1,434,369	1,511,469	1,718,019	1,799,719	1,872,669	2,074,019
Total	10,163,019	10,521,487	11,010,029	11,373,684	11,723,394	12,078,494

[1] - York City determined by subtraction.

Table 2-3: Flow Allocations, Current Flows and Anticipated Flows (gpd)
York City Wastewater Treatment Plant

Municipality	Total Allocation (of 26 mgd)	Current Flow Condition		Future Flow Condition			
		Average Flow 2012	Remaining Allocation 2012	Projected Five-Year Increase	Projected Flow 2017	Remaining Allocation 2017	Percent Allocation Used
Manchester Twp	2,434,900	932,918	1,501,982	356,250	1,289,168	1,145,732	53%
N York Borough	531,200	178,529	352,671	5,250	183,779	347,421	35%
Spring Garden	3,011,500	1,681,513	1,329,987	567,063	2,248,576	762,924	75%
Springettsbury	4,000,000	258,978	3,741,022	0	258,978	3,741,022	6%
W Manchester	3,378,800	2,178,513	1,200,287	164,100	2,342,613	1,036,187	69%
W York Borough	1,200,500	553,992	646,508	57,147	611,139	589,361	51%
York City[1]	8,080,100	2,944,207	5,135,893	126,015	3,070,222	5,009,878	38%
York Twp	3,363,000	1,434,369	1,928,631	639,650	2,074,019	1,288,981	62%
Total	26,000,000	10,163,019	15,836,981	1,915,475	12,078,494	13,921,506	46%

[1] - York City determined by subtraction.

2.2. 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 2-1; tabular data used to generate the graph are located in Table 2-4 and Table 2-5. 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, 2008 through 2012, were used to determine an arithmetic average five-year flow in million gallons per day. This five-year average flow, 11.005 mgd, was used to project flows from 2013 through 2017. Expected total yearly hydraulic increases, obtained from Table 2-1, 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 1.183 was obtained. The projected three-month maximum average flow is the product of the ratio and the projected annual average flow.

Figure 2-1 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 2017 an annual average hydraulic loading of 12.921 mgd and a three-month maximum average flow of 15.292 mgd is projected (Table 2-5). An hydraulic overload is not projected to occur within the next five years.

2.3. Organic Loading Projection

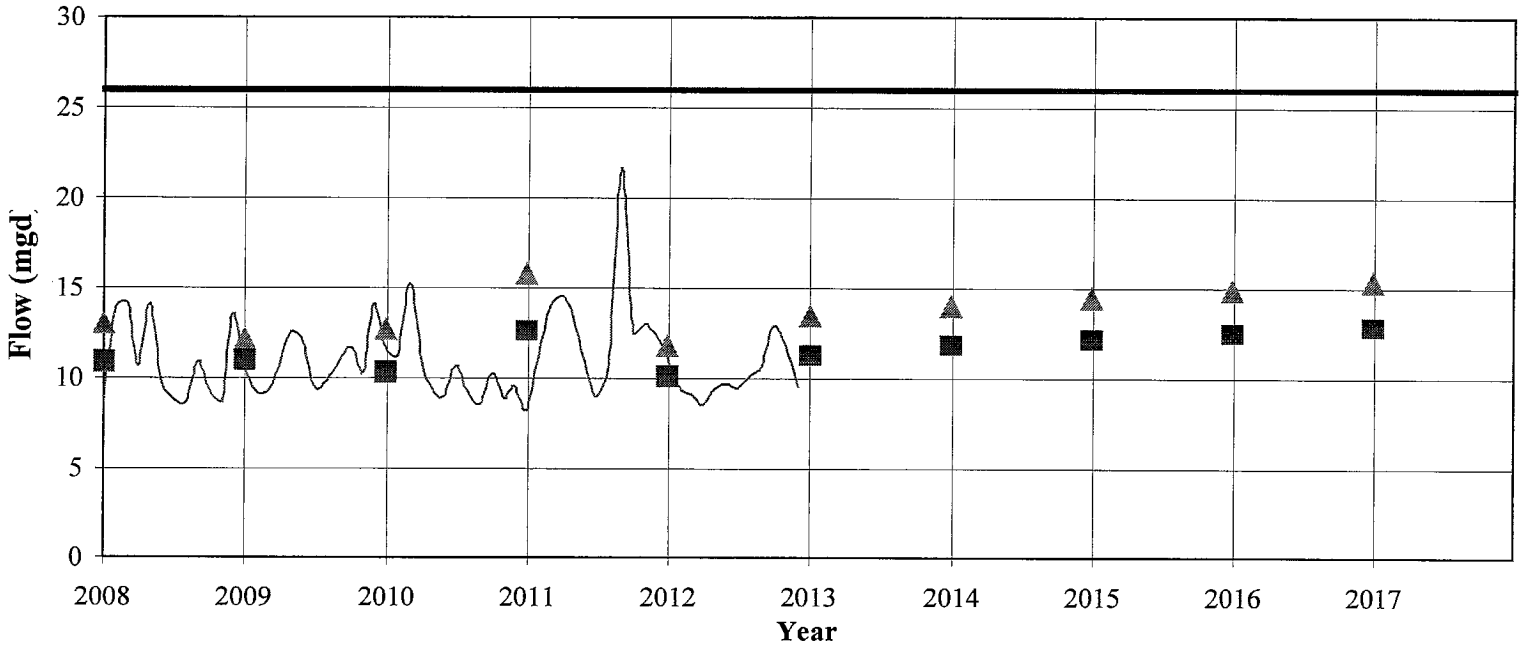
The design organic capacity of the plant is 62,884 lbs/day. Average organic loadings and peak organic loadings at the York City Wastewater Treatment Plant were projected for a five-year horizon. Projection results are displayed in Figure 2-2; tabular data used to generate the graph are located in Table 2-6 and Table 2-7. 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, 2008 through 2012, were used to determine an arithmetic five-year average organic loading of 22,714 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 1.204 was obtained. The projected one-month maximum flow is the product of the ratio and the projected annual average BOD loading.

Figure 2-2 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 design organic capacity of 62,884 lbs/day. In 2017 an annual average organic loading of 26,708 lbs/day and a peak organic loading of 32,157 lbs/day is projected (Table 2-7). An organic overload is not projected to occur within the next five years.

Figure 2-1: Hydraulic Loading, 2008-2017 (2013-2017 Projected)
York City Wastewater Treatment Plant



NPDES Permitted Limit ▲ 3-Month Maximum Average Flow ■ Annual Average Flow —— Monthly Average Flow

Table 2-4: 2008-2012 Historic Flows (mgd)
York City Wastewater Treatment Plant

Month	2008	2009	2010	2011	2012
January	8.660	10.668	**11.655**	8.167	11.224
February	13.877	9.232	**11.194**	11.151	9.560
March	**14.096**	9.367	**15.234**	13.976	9.134
April	**10.620**	10.984	10.930	14.602	8.521
May	**14.143**	12.603	9.418	13.410	9.473
June	9.617	11.926	8.957	10.907	9.654
July	8.828	9.470	10.618	8.952	9.409
August	8.703	9.932	9.187	10.784	10.095
September	10.881	10.903	8.556	**21.691**	**10.629**
October	9.235	**11.720**	10.169	**12.564**	**12.915**
November	8.827	**10.389**	8.921	**12.960**	**11.782**
December	13.609	**14.087**	9.546	12.473	9.520
Max. 3-Month Avg	12.953	12.065	12.694	15.738	11.775
Annual Average	10.919	10.953	10.370	12.622	10.163
Ratio	1.186	1.102	1.224	1.247	1.159
Rainfall (in)	49.97	34.70	40.27	61.47	44.67

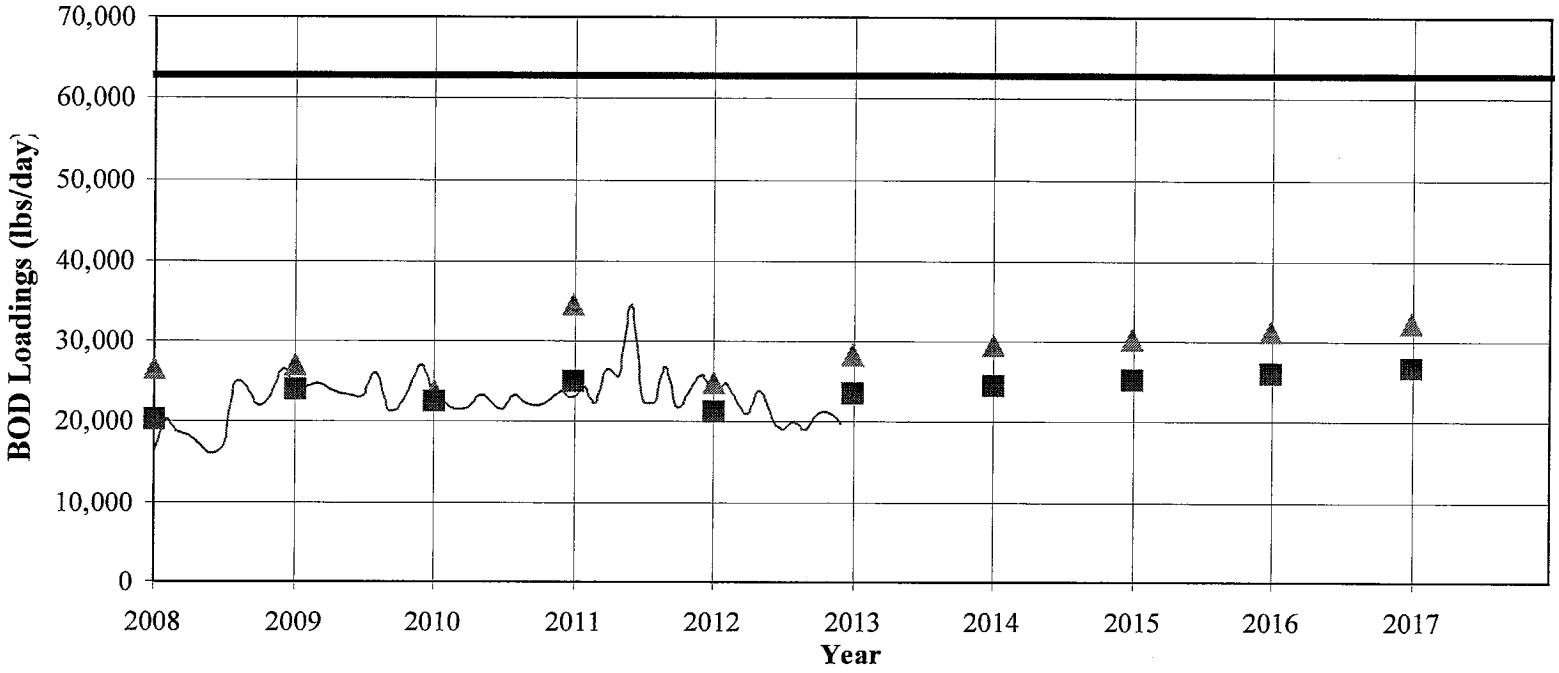
Table 2-5: Hydraulic Loading Projection (mgd)
York City Wastewater Treatment Plant

Year	Three-Month Maximum	Average Flow	Ratio	Hydraulic Increase	Projected Average Flow*	Projected Maximum 3-Month Flow**
2008	12.953	10.919	1.186			
2009	12.065	10.953	1.102			
2010	12.694	10.370	1.224			
2011	15.738	12.622	1.247			
2012	11.775	10.163	1.159			
Five-Year Average	13.045	11.005	1.183			
2013				0.358	11.364	13.449
2014				0.489	11.852	14.027
2015				0.364	12.216	14.458
2016				0.350	12.566	14.872
2017				0.355	12.921	15.292

*- 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 2-2: Organic Loading, 2008-2017 (2013-2017 Projected)
York City Wastewater Treatment Plant



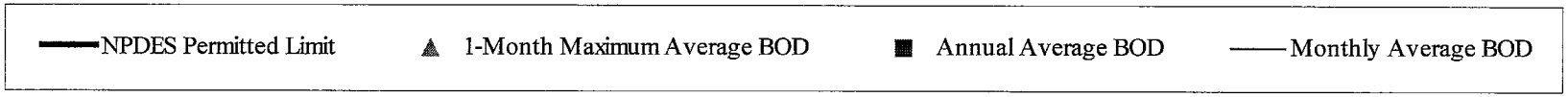


Table 2-6: 2008-2012 Historic Organic Loading (lbs/day)
York City Wastewater Treatment Plant

Month	2008	2009	2010	2011	2012
January	16,445	24,342	23,471	23,144	23,688
February	20,311	24,280	22,424	24,329	**24,885**
March	18,804	24,939	21,614	22,230	22,837
April	18,261	24,135	21,910	26,617	21,054
May	17,222	23,661	23,331	25,779	23,708
June	16,035	23,408	22,292	**34,441**	20,675
July	17,357	23,388	21,681	22,664	19,030
August	24,822	25,968	23,211	22,594	20,166
September	24,304	21,700	22,334	26,816	18,995
October	22,184	21,656	22,102	21,826	21,098
November	23,359	24,296	22,955	23,914	21,017
December	**26,671**	**27,140**	**23,747**	25,882	19,964
Maximum 1-Month Average	26,671	27,140	23,747	34,441	24,885
Annual Average	20,474	24,097	22,590	24,993	21,415
Ratio	1.303	1.126	1.051	1.378	1.162
BOD Annual Average (mg/l)	237	271	273	255	261

Table 2-7: 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***
2008	26,671	20,474	1.303				
2009	27,140	24,097	1.126				
2010	23,747	22,590	1.051				
2011	34,441	24,993	1.378				
2012	24,885	21,415	1.162				
Five-Year Average	**27,377**	**22,714**	**1.204**				
2013				0.358	747	23,461	28,249
2014				0.489	1,019	24,480	29,475
2015				0.364	758	25,238	30,388
2016				0.350	729	25,967	31,266
2017				0.355	740	26,708	32,157

*- 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

(Intentionally blank)

3. *Sewer System Monitoring, Maintenance, Repair and Rehabilitation §94.12(a)(5), (6) & (7), in part*

Each municipality performs various activities to investigate line condition and infiltration and inflow, and anticipates maintenance and repair activities. Applicable information regarding 2012 sewer system monitoring, maintenance, repair, and infiltration and inflow (I/I), provided in each municipality's wasteload management report located in the Appendices A through C and E through H, are summarized below. The reader is referred to the appendices for more detailed information.

Overall, there are over 322 miles of sewer line tributary to the York City Wastewater Treatment Plant and 21 pump stations. Of the entire collection and conveyance system tributary to the York City Wastewater Treatment Plant, approximately 694,347 linear feet (131 miles) of pipe were cleaned and/or televised in 2012, which represents 41% of the system.

Manchester Township has 65.58 miles of sewer line tributary to the York City system. In 2012, 44,191 linear feet of sewer line were cleaned and 13,691 linear feet were televised. Root cutting and root control application was performed on 4,836 feet of line. Eleven manhole frames were raised or repaired, and 121 manholes were inspected. Smoke testing of 12,053 linear feet of line was performed. 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. Staff conducted grease trap inspections. In 2013 the township will continue to televise sewer lines to identify potential sources of infiltration and inflow. The four pump stations are not expected to have an overload condition within the next two years.

North York Borough cleaned area #4 of the borough's sewer system using Manchester Township's equipment. The cleaning is part of the borough's regular sewer maintenance program, which cleans each manhole section at least once every four years. The borough has no plans for major maintenance or repair projects in 2013. The borough's pump station has been 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 48,264 linear feet, and flushed and televised 7,293 linear feet of pipe in 2012, which represents 20% of the township's system tributary to the York City Wastewater Treatment Plant. The township repaired twenty-eight feet of sewer mains and replaced thirty-five laterals, as well as hired a contractor to repair or replace 178 feet of 8-inch line on Brockie Drive, Horn Alley, and Hollywood Drive at Ogontz Street. Similar repair and replacement projects are being considered for 2013. 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 tributary to the York City system, flushed 12,383 linear feet of line in the Lincolnway service area, and televised 3,995 linear feet in 2012. In 2012 approximately 410 linear feet of 8-inch main was relined using cured in place pipe to reduce infiltration. In a separate project, seven manholes were either replaced or lined to reduce infiltration. In 2013 the township will conduct flushing and televising to identify sources of inflow and infiltration. The West King Street pump station is considered hydraulically overloaded. An interceptor project was completed in December 2009, and flow reduction information was collected in 2010 and 2011 to determine if the hydraulic overload condition was corrected. In 2010 and early 2011 flows to the pump station were generally lower. On June 21, 2012 the Pennsylvania Department of Environmental Protection issued a letter denying new connections to the systems tributary to the East Market Street and East King Street pump stations until the overload is eliminated. In December 2012 the township commenced a system-wide televising and flushing project for areas tributary to these pump stations. The project will result in approximately 74,000 linear feet of line televising to identify infiltration areas: an assessment report will be prepared in 2013 to identify problematic areas.

West York Borough, which has 10.37 miles of line tributary to the York City system, utilizes neighboring municipalities' services in conjunction with service provider contracts to maintain its sanitary sewers. During 2012, 12,196 linear feet of sewer line and 52 manholes were flushed, which is 22% of the borough's system. Two short sanitary sewer main sections on West Market Street were televised. The municipality will continue to perform routine flushing maintenance in 2013.

York City, which has approximately 98.5 miles of sewer, cleaned 445,934 linear feet of sewer line during 2012 (86% of the sewer system). One manhole frame and cover was replaced or adjusted to grade, and 4,146 manholes were inspected. Three laterals were repaired. The chemical root control program was continued in 2012: root control was applied to twenty-two service laterals and to 2,643 feet of sewer line in problem areas. One main repair occurred in 2012: a section of 8-inch terra cotta pipe failed on South West Street and required emergency repair. All sanitary sewer data are managed using the City of York's geographic information system. Eight surcharge indicators are used at various locations within the collection system to monitor the impact of rain events on conveyance capacity. Tropical Storm Sandy, which occurred October 29-30, 2012, was measurable on the surcharge indicators. All wastewater was contained in the collection and conveyance system. Three sections were identified for future work: Fire Side, East Prospect Street, and Newberry Street.

York Township has approximately 46.9 miles of sanitary sewer line. In 2012, 106,400 feet of main were flushed and televised in the Tyler Run drainage basin. Pump station elapse time meters, which indicate motor operating time, are generally read by township personnel on a weekly basis during routine maintenance. No overloads are expected at any of the pump stations. The township is replacing equipment in the Marlborough pump station: construction will be complete in early 2013. The township developed a corrective action plan to identify and remove infiltration and inflow from the Tyler Run interceptor. Actions completed include: flushing and televising of lines; air testing and grouting; lining of ten sections of 8-inch diameter sewer; replacement of two sections of sewer main; and, night-time weiring activities, the results of which were shared with Spring Garden Township for follow-up corrective action. These efforts reduced infiltration and inflow to the Tyler Run interceptor. Infiltration and inflow reduction efforts will continue in 2013.

The City of York, York Township, and Springettsbury Township updated their municipal Act 537 Plans in 1999. The plans address collection and conveyance condition, capacity, and infiltration and inflow reduction. Since then many municipalities have increased their inflow and infiltration reduction activities through source identification, line replacement, equipment purchases, updating comprehensive map sources, and sewer system model development.

The York City Sewer Authority continues to update its evaluation of the sanitary sewer conveyance and collection system with updated model flows. The plan focuses on identifying areas where inflow and infiltration can be reduced, and assessing and prioritizing where improvements can be made in the sewer system. This on-going system evaluation is a result of Act 537 planning activities discussed above. While some improvements will occur solely in the City of York, contributory boroughs and townships will also participate in improvements.

4. Conveyance Capacity §94.12(a)(6), in part

4.1. Act 537 Plan Updates

The Pennsylvania Sewage Facilities Act (Act 537) requires each municipality in the Commonwealth to develop and maintain a sewage facilities plan to address the community's sewage needs. An Act 537 Plan identifies current and future sewage treatment, disposal, conveyance and collection needs and develops the means to meet sewage needs and implement recommended solutions.

York City, York Township, and Springettsbury Township, whose flows may be routed to the York City Wastewater Treatment Plant instead of the Springettsbury Wastewater Treatment Plant *via* a pump station located on Loucks Mill Road, updated their Act 537 Sewage Facilities Plans in 1999. Because the City of York sewer system is 'downstream' and receives flow from tributary municipalities, the York City Sewer Authority Regional Act 537 Plan included alternative development scenarios for all existing contributing municipalities and Springettsbury Township, and functions as both a municipal plan and a regional plan for the York City wastewater treatment service area. The reader is referred to the following documents for a detailed discussion of the methodology, findings and recommendations of the plans: York City Sewer Authority Regional Act 537 Plan, 1999; York Township Act 537 Sewage Facilities Plan Update, 1999; and Springettsbury Township Act 537 Plan Facilities Plan Update (Phase II), 1999. Improvement projects recommended in the plans, which project sewage needs through 2020, will be included in future Chapter 94 reports as capacity needs dictate. The findings and recommendations of the plans that affect the York City sewage treatment and conveyance system are summarized below.

The 1999 York City Sewer Authority Regional Act 537 Plan flow metering and flow projection analysis for the 20-year planning horizon indicate slight surcharge conditions at some locations in the conveyance system. Plan recommendations include improving some interceptors as conveyance capacity is required. In keeping with plan recommendations, surcharge indicators are located at key manhole locations and are monitored: upgrades and infiltration and inflow reduction measures will be implemented as required. Infiltration and inflow evaluations have been, and continue to be, conducted and recommendations have been implemented in identified areas. Areas of infiltration and inflow have been identified citywide. The City of York placed surcharge indicators in the Codorus Trunkline interceptor, and began a system-wide evaluation of infiltration and inflow in 2001.

The 1999 York Township Act 537 Sewage Facilities Plan Update findings indicate a need for expansion of some interceptors to accommodate projected 2020 flows. The plan recommends conducting detailed modeling of the Tyler Run Interceptor and upgrading the interceptor to convey 2020 flows as needed. Sections of this interceptor were rehabilitated in 2001, 2002, 2003, 2005, 2006, 2010, 2011 and 2012. As recommended by the plan, infiltration and inflow evaluations are being conducted.

4.2. Identified Potential Conveyance Capacity Exceedance

The following projects were identified to correct potential conveyance capacity problems. Most recently completed studies are discussed first. The intent of this list is to summarize preventative measures to reduce potential conveyance and collection system overloads. Chapter 94 requires a discussion of conveyance problems expected to occur within five years; the following information may include potential capacity problems identified beyond the required five-year planning horizon.

Annual York City Sewer Authority Interceptor System Evaluation Update: Ongoing
The York City Sewer Authority continues to update its sanitary sewer conveyance and collection system evaluation. The plan focuses on identifying areas where inflow and infiltration can be reduced, and assessing and prioritizing where improvements can be made in the sewer system. This on-going system evaluation is a result of Act 537 planning activities discussed above. The latest update was completed in January 2009: scheduling for the next update will be discussed in 2014.

2012 Surcharge Indicator Readings: Ongoing
As recommended by the 1999 York City Act 537 Plan, surcharge indicators were installed in the Tyler Run and Codorus Trunkline interceptors due to projected capacity restrictions. Monitoring of the flow meters and eight surcharge indicators continued in 2012. Surcharge indicators registered the Tropical Storm Sandy event of October 29-30, 2012 when a total of 6.07 inches of precipitation occurred. All wastewater was contained in the sewer collection and conveyance system. The ongoing surcharge indicator program will continue in 2013.

West King Street Pump Station Number 1: Monitoring Post-Construction
The West King Street pump station located in West Manchester Township was identified as hydraulically overloaded. In 2007 the township replaced 1,100 feet of interceptor tributary to the West King Street pump station. The township also redirected flows from this pump station to the West Market Street pump station as an interim measure. An interceptor replacement project was completed in December 2009 to reduce infiltration and inflow received at the pump station. Flow data was collected in 2010 and 2011 to document flow reductions and determine if the overload was eliminated: the data show generally lower flows. No sewer tap-ins or additional flows are allowed in the area tributary to the West King Street and West Market Street pump stations until the overload is eliminated. In December 2012 the township commenced a system-wide televising and flushing project for areas tributary to these pump stations. The project will result in approximately 74,000 linear feet of line televising to identify infiltration areas: an assessment report will be prepared in 2013 to identify problematic areas.

Codorus Creek Interceptor Study
A sanitary sewer capacity analysis that included all areas of the sanitary sewer system in the City of York was completed in 2000. Additional flows approved through the sewer module planning review process for new land developments are used to continuously update the base flow data obtained in the 2000 study. The additional flows are assigned to the appropriate receiving interceptor to track potential hydraulic overloading in all interceptors. A segment of the Codorus Creek interceptor has a reduced pipe cross-section and is identified as having the potential to be hydraulically overloaded in the future. In 2010 limited flow metering was conducted at Grant and Dublin Streets just west of the Codorus Creek between West Market and West King Streets to determine approximate pipe capacity and available capacity for future connections.

4.3. Prevented or Corrected Conveyance Capacity Exceedance

The following projects were implemented to correct an existing conveyance capacity problem or to prevent an anticipated conveyance capacity problem. Most recently implemented projects are discussed first. The intent of this list is to provide a summary of major improvement projects in the sanitary sewer system. The following information may include potential capacity problems that were identified beyond the required five-year planning horizon.

Poor House Run Siphon Replacement: Completed
Due to design, pipe approaches on either side of the siphon, and lack of adequate cleaning access, this siphon was identified as a potential hydraulic restriction. Spring Garden Township and the City of York jointly improved the siphon, which is located near Loucks Mill Road. The siphon was realigned in conjunction with the Poor House Run Interceptor improvements. The project was put out for bid in 2010, with work starting in late 2010 and project completion in 2011.

Poor House Run Interceptor Replacement: Completed
The Poor House Run Interceptor was identified as a significant source of infiltration and inflow and having potential future hydraulic overload conditions. The project realigned the interceptor from just north of Chestnut Street to the Codorus Creek crossing in conjunction with the Poor House Run siphon project in 2011. The York City Sewer Authority undertook this multi-jurisdictional project with participation from municipalities that contribute flow to the line (City of York, Spring Garden Township).

Willis Run Crossing Retrofitting: Completed
The Willis Run stream crossing was identified as a location of head loss in the Lower Codorus Creek interceptor. Improvements to the stream crossing were completed in 2011, and improved hydraulic flow in the interceptor and as well as addressed maintenance and sedimentation problems. The project was constructed in conjunction with the 2011 Poorhouse Run interceptor and siphon projects.

Arch Street Interceptor Improvements: Completed
The Arch Street Interceptor was identified as a source of significant infiltration and inflow with the possibility of future hydraulic overload conditions. Approximately 2,550 linear feet of the 100-year old terra cotta pipe was replaced with 18-inch, 24-inch, and 27-inch PVC pipe from North Beaver Street northwards to South George Street and thence to Arch Street near where the line crosses the Codorus Creek. Preliminary design work started in 2008, which included extensive test pits and utility markings due to the numerous utilities in the area and a railroad crossing. Construction began in December 2009 and was completed in 2010. This project is also known as the Northwest Triangle Sewer Replacement Project, and was funded in part by a PAH2O grant.

Gas Avenue Interceptor Improvements: Completed
The Gas Avenue Interceptor project slip-lined compromised terra cotta pipe with PVC from North Newberry Street to Grant Street to eliminate the exfiltration of sanitary sewer wastes into the underlying stormwater sewer. The problem was identified in June 2008. The interceptor was relined in 2009. The project was completed in early-2010 with grouting of all laterals.

Marlborough Pump Station, York Township: Completed
The township identified problems and made repairs to the mains in the Marlborough West subdivision to reduce infiltration and inflow to the Marlborough pump station.

Pershing Avenue Interceptor Replacement Project: Completed
The Pershing Avenue Interceptor was replaced in 2008 from West Philadelphia Street to West Mason Avenue in downtown York. A total of 817 feet of 18-inch terra cotta pipe was replaced with 21-inch PVC pipe. Six manholes were also replaced. This area of aging infrastructure was targeted for replacement based on the City of York sanitary sewer sub-basin study aimed at reducing infiltration and inflow.

Philadelphia Street Storm Sewer Improvements, Phase II: Completed
The Philadelphia Street Storm Sewer Improvement Study examined how various downtown City of York roof leaders could be removed from the sanitary sewer system. Removal of the roof leaders from the sanitary sewer system could not occur until the storm sewer infrastructure was improved. In 2007 and 2008 roof leaders were disconnected from the sanitary sewer system and connected to the storm water system, thus eliminating a substantial amount of stormwater from the sanitary sewer system.

Farmbrook Pump Station Number 4, Manchester Township: Completed
An hydraulic overload was projected for the Farmbrook pump station located in Manchester Township. The township requested and obtained approval from DEP in 2006 to modify the pump station to address the projected overload. Improvements were completed in early 2007 with the installation of new impellers.

Tyler Run Interceptor Upgrade: Completed
York Township upgraded a portion of the Tyler Run interceptor to address conveyance capacity issues and to accommodate future development. This capacity issue affected York and Spring Garden Townships and the City of York. Since 2001 York Township has replaced 7,671 feet of main in the drainage basin, in addition to televising, grouting and repairing joints, and repairing manholes. Work on the interceptor was completed in 2006.

Roosevelt Avenue Sewer Study, Phase 2: Completed
The York City Roosevelt Avenue Sewer Study focuses on the interceptor from the York City Business and Industrial Park to the Willis Run interceptor connection at the Codorus Creek interceptor. The final engineering report, Roosevelt Avenue Update of Interceptor Facilities Study of the Pennsylvania Avenue Interceptor, was completed in 1996 and addresses modeled future capacity problems. The study evaluates the interceptor for physical and hydraulic carrying capacity with total land use build out to the year 2045. Flow projections and hydraulic analysis indicate that an overload condition might exist in the future. Phases 1 and 2 replaced line from the beginning of the interceptor in the York City Business and Industrial Park to approximately Fahs Street. Phase 1 was constructed in 1999 in coordination with the PennDOT Route 30 improvements. The original Phase 2 scope was reduced to coordinate construction with the West Manchester Township Willis Run Relief Interceptor upgrade project, which accepts flow from York City and Manchester Township with considerable cost savings for all municipalities. Phase 2 construction was completed in 2000. Phase 3 will be implemented after review of flow conditions and projections after completion of Phase 1 and 2 improvements.

Willis Run Relief Interceptor: Completed
West Manchester Township upgraded a 16-inch interceptor extending from Route 30 to Fahs Street to accommodate expected future growth in the township. Approximately 3,000 linear feet of line were replaced. Construction was completed in 2000 in coordination with the PennDOT Route 30 improvements and York City's Roosevelt Avenue Interceptor Upgrade project.

Roosevelt Avenue Sewer Study, Phase 1: Completed
The scope of the York City Roosevelt Avenue Sewer Study is described above. Phase 1 project design occurred in 1998 and construction was completed in 1999 in coordination with PennDOT's Route 30 improvements. The original Phase 2 scope was reduced to coordinate construction with a West Manchester Township interceptor upgrade, which will accept flow from York City and Manchester Township with considerable cost savings for all municipalities.

Boundary Avenue Sewer Improvements: Completed
Several commercial, residential and institutional land development projects are expected to occur at the intersection of South George Street and Boundary Avenue in the City of York. In anticipation of this development, the condition and capacity of the sewer infrastructure were evaluated in 1996. The system was comprised of vitrified clay pipe and brick manholes with approximately 983 linear feet of collection directly affected by the development. Design, contract award, and construction occurred in 1998. All sections were replaced with 8-inch diameter PVC and pre-cast concrete manholes, with the exception of 43 feet of a low slope pipe segment at South George Street that was replaced with 10-inch diameter pipe. Approximately 700 linear feet of poor condition or low slope line near the anticipated development activity was identified and included in the contract for replacement to prevent capacity issues and to coordinate sewer improvements with anticipated utility, street and sidewalk improvements.

Pennsylvania Avenue Interceptor Upgrade, Phase 1: Completed
The York City Pennsylvania Avenue Interceptor Upgrade Study was initiated due to poor flow conditions, and recommended reconstruction of the present system. The interceptor begins at the York City Business and Industrial Park and terminates at the Willis Run interceptor near North George Street. The final engineering report, Update of Interceptor Facilities Study of the Pennsylvania Avenue Interceptor, was completed in 1995. The study updates a 1988 study of similar name and evaluates the interceptor for physical and hydraulic carrying capacity with total land use build-out to the year 2045. Flow projections and hydraulic analysis indicated that an overload condition might exist in the future.

The study recommended a two-phased approach for upgrade. Phase I addressed short-range capacity problems by replacing sections of 8-inch line with 18-inch line in the northern portion of the study area and replacing a low slope 12-inch line section with 18-inch line. Phase I improvements were constructed in 1997 (PADEP A3-67001-066-3). Phase II will replace remaining 12-inch sections of line that are projected to surcharge with 18-inch line, and will be implemented only after Phase I improvements are completed, and flow conditions and projections are reevaluated.

Saint Charles Way Relief Sewer: Completed
Approximately 1,000 linear feet of line were replaced in 1997 in the vicinity of Interstate-83 and Acco Drive in York Township in response to resident complaints during extended wet weather periods in 1996. The low-lying lines experienced joint failure and were receiving inflow. The improvements, which included preventing surface water entry, were intended to address areas downstream of MacDonald's Heights.

North George Street Interceptor: Completed
Construction of a relief interceptor for the Manchester Township Roundtown and North George Street area was completed in 1995. Separately, Manchester Township and York City evaluated hydraulic backup problems occurring approximately 1.25 miles upstream from the treatment plant. During high flow periods on the line, Manchester Township pumped excess flow to a creek tributary to Lighteners Run. Manchester Township and York City televised the line in 1995 and 1996, respectively. Contract award and construction occurred in 1997 for the replacement of 2,079 linear feet of main and the repair of 1,120 linear feet of lateral along North George Street to abate sources of infiltration and inflow.

Edgar Street Sewer Bypass (Poor House Run Interceptor): Completed
Spring Garden Township's sewer line experienced infiltration induced overload during long periods of rain causing the sewer line to back up into area basements around Irving Road and Springdale Avenue. The 1994 Edgar Street Sewer Study reviewed Spring Garden Township's by-pass sewer line, the condition and capacity of York City's sewer line downstream of the proposed connection, and possible corrective measures. The Edgar Street Relief Sewer Study estimated flows from Spring Garden Township. Construction of the Edgar Street Bypass, a joint project between York City and Spring

Garden Township, began in late 1995 and was completed in early 1996 (PADEP A3-67001-068-3z). Two sections of constructed line reroute Spring Garden Township and York City flows to appropriate sections. York City and Spring Garden Township have not received any sewer complaints or observed any problems in the Edgar Street area since the completion of this project.

Upper Codorus Creek Interceptor: Completed

Deteriorated pipe was observed during inspection of the Upper Codorus Creek interceptor from South Richland Avenue to its intersection with the Tyler Run interceptor. Capacity analysis indicated potential for hydraulic overload in this section of pipe as well. Consequently, Spring Garden Township, West York Borough, York City and York Township, the municipalities serviced by this line, contracted to replace the line with a larger diameter pipe. Construction commenced in February 1994 and was completed in October 1994. No capacity problems have been observed.

Tyler Run and Codorus Creek Interceptors: Completed

The Tyler Run and Codorus Creek trunk line interceptor projects eliminated both the observed Tyler Run interceptor overload and theoretical overload of the Codorus Creek trunk line interceptor. Observation of these lines in 1993 and 1994 indicated that no problems existed; no subsequent problems were observed.

5. *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 2012. In 2012, the laboratory participated in the ERA Water Pollution Proficiency Testing Study 206. All values reported in the study were within acceptable limits.

5.1. 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 colleted 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.

5.2. Analysis

In 2012 the laboratory performed more than 27,500 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: oil and grease, cyanide, and flash point.

Table 5-1 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 5-2 below.

Table 5-1: 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	35	0	0	35	35	0	21	35	0
Effluents	21	0	0	21	21	1	21	21	7
Mixed Liquors	34	14	0	0	0	0	0	0	0
Return Sludges	14	14	0	0	0	0	0	6	0
Other Sludges	0	14	14	0	0	0	0	0	0
GBT Samples	7	14	14	0	0	0	0	0	0
Digester Profile	0	6	6	0	0	0	0	0	0
Train 2 & Train 3 Profiles	0	0	0	0	30	0	30	30	0
Weekly Samples	111	62	34	56	86	1	72	92	7

Notes: Totals do NOT include quality control samples, industrial wastewater samples, special samples, blanks, etc. Total analyses per year = 27,092.

Table 5-2: Number of Industrial Samples Analyzed per Year, by Analyte

Analyte	Number of Samples
pH*	155
Total Suspended Solids	270
BOD_5	265
NH_3	230
PO_4	237
Metals**	189

Notes: Totals do NOT include treatment plant samples, quality control samples, special samples, blanks, etc. The total number of industrial analyses per year is 1,191. 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.
** - 96 metals samples were sent to ALS Environmental for analysis due to temporary reduction in laboratory staff.

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 5-3 lists each analyte tested in the laboratory along with the reference method. All references to Standard Methods refer to the 18th 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 5-3: 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 & C
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	SM 9222 D

5.3. 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.
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.

5.4. 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 samples are never used to selectively report data for compliance purposes: split sample results are averaged in accordance with USEPA guidelines.

5.5. 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).

(Intentionally blank)

6. *Plant Performance*

Plant performance is governed by effluent limitations associated with the NPDES permit for the York City Wastewater Treatment Plant. Permit effluent limitations are presented in Table 6-1. Monthly plant performance data are presented in Table 6-2 through Table 6-7, and treatment plant 2010 through 2012 influent, effluent, and biosolids local limit data are summarized in Table 6-8 through Table 6-10.

The York City Wastewater Treatment Plant met all permit requirements in 2012 with three exceptions. On August 6, 2012 the Train 2 effluent screw pumps and sand filter system lost power and the recirculation pumps in Train 3 malfunctioned, and on August 7, 2012 the treatment plant discharged partially treated sewage due to loss of electrical power to the ultra-violet light disinfection system. PADEP issued a violation letter for the August 2012 events. During the fifth week of October 2012, the maximum average weekly total suspended solids (TSS) limit was exceeded due to Tropical Storm Sandy. The reader is referred to Appendix K for more detailed information regarding the August 2012 and October 2012 events.

Table 6-1: NPDES Permit Effluent Limitations
York City Wastewater Treatment Plant

Pollutant	Mass Units (lbs/day)		Concentration (mg/l)			
	Average Monthly	Average Weekly	Average Monthly	Average Weekly	Maximum Daily	Instantaneous Maximum
5-day CBOD[1] (5/1-10/31)	3,253	4,879	15	22	N/A	30
5-day CBOD[1] (11/1-4/30)	4,337	6,505	20	30	N/A	40
Total Suspended Solids[1]	6,505	9,758	30	45	N/A	60
Fecal Coliform[2] (5/1-9/30)	N/A	N/A	200[3]	N/A	N/A	N/A
Fecal Coliform[2] (10/1-4/30)	N/A	N/A	2,000	N/A	N/A	N/A
Ammonia-N (5/1-10/31)	369	N/A	1.7	N/A	N/A	3.4
Ammonia-N (11/1-4/30)	455	N/A	2.1	N/A	N/A	4.2
Total Phosphorous	434	N/A	2.0	N/A	N/A	4.0
Dissolved Oxygen	N/A	N/A	minimum of 5.0 mg/l at all times			
pH	N/A	N/A	minimum of 6.0 SU and maximum of 9.0 SU at all times			
Total Residual Chlorine[4]	N/A	N/A	monitor and report			
Kjeldahl-N	N/A	N/A	monitor and report			
Nitrate-Nitrite as N	N/A	N/A	monitor and report			
Total Nitrogen	N/A	N/A	monitor and report			
Annual Net Total Nitrogen[5]	N/A	N/A	2/1/2008 to 2/27/2011 monitor and report; 2/28/2011 to 1/31/2013 474,880 pounds per year			
Annual Net Total Phosphorus[5]	N/A	N/A	2/1/2008 to 2/27/2011 monitor and report; 2/28/2011 to 1/31/2013 63,317 pounds per year			

[1] - 30-day average percent removal shall not be less than 85%.
[2] - per 100 ml as a geometric average.
[3] - also not to exceed 1,000/ml in more than 10% of samples tested.
[4] - Monitoring for total residual chlorine (TRC) is only required when chlorine is used for disinfection.
[5] - The annual net mass loading in pounds per year is the sum of the monthly net mass loadings for one year beginning October 1st and ending September 30th. The reader is referred to the facility's NPDES permit, Part C.II for a full explanation of Chesapeake Bay nutrient requirements.
Source: NPDES permit PA0026263 Part A, February 1, 2008-January 31, 2013.

Dissolved oxygen, pH, and fecal coliform information are presented in Table 6-2. The average dissolved oxygen effluent concentration was 9.0 mg/l with no daily measurements less than the instantaneous minimum permit concentration of 5.0 mg/l. The pH permit limit, an instantaneous minimum of 6.0 standard units and an instantaneous maximum of 9.0 standard units, was not exceeded. The minimum instantaneous pH was 7.3 SU and the maximum instantaneous pH was 7.8 SU.

The permit limits for fecal coliform, by geometric average are: a monthly average of 2,000 colonies per 100 ml from October through April, and monthly average of 200 colonies per 100 ml from May through September while also not exceeding 1,000 colonies per 100 ml in more than 10% of samples tested. In 2012 the monthly fecal coliform geometric effluent averages ranged between 1 and 32 colonies per 100 ml, well below permit requirements, and May through September samples did not exceed the 1,000 colonies per 100 ml on more than 10% of samples tested criterion. On August 7, 2012 the treatment plant discharged partially treated sewage due to loss of electrical power to the ultra-violet light disinfection system. Upon discovery flows were diverted to Train 2 and to the 001 outfall and emergency disinfection was placed in service. The plant returned to normal operation about eight hours later after an electrical breaker was found to be off causing the loss of power to the ultra-violet light disinfection building. The estimated volume of un-disinfected plant effluent discharged from outfall 002 during the event was 9.0 million gallons. The estimated volume of plant effluent disinfected with sodium hypochlorite discharged from outfall 001 during the event was 2.0 million gallons.

Table 6-2: Dissolved Oxygen, Fecal Coliform and pH Effluent Concentrations, 2012
York City Wastewater Treatment Plant

Month	Dissolved Oxygen[1]		Fecal Coliform[2]	pH[3]	
	Average (mg/l)	Minimum (mg/l)	Geometric Average (colonies/100ml)	Minimum (SU)	Maximum (SU)
January	9.9	9.3	9	7.3	7.6
February	10.0	9.4	22	7.4	7.6
March	9.6	8.8	28	7.4	7.7
April	9.3	8.8	32	7.4	7.6
May	8.8	8.3	14	7.5	7.7
June	8.5	7.8	24	7.5	7.8
July	8.1	7.6	11	7.4	7.7
August	8.0	7.3	31	7.5	7.7
September	8.2	7.6	9	7.4	7.7
October	8.6	7.5	2	7.5	7.7
November	9.3	8.6	1	7.5	7.8
December	9.3	8.8	2	7.4	7.7
Annual Average	9.0	N/A	N/A	N/A	N/A

Permit Limits:
[1] - minimum of 5.0 mg/l at all times.
[2] - May 1 through September 30: monthly average of 200 colonies/100ml and not to exceed 1,000 colonies/100 ml in more than 10% of samples tested. October 1 through April 30: monthly average of 2,000 colonies/100ml.
[3] - from 6.0 to 9.0 standard units inclusive.

Five-day carbonaceous biochemical oxygen demand ($CBOD_5$) effluent data are summarized in Table 6-3. Effluent permit limits for this parameter during May through October are as follows: weekly average of 22 mg/l and 4,879 lbs/day; monthly average of 15 mg/l and 3,253 lbs/day; and instantaneous maximum of 30 mg/l. Concentration limits for November through April are: weekly average of 30 mg/l and 6,505 lbs/day; monthly average of 20 mg/l and 4,337 lbs/day; and instantaneous maximum of 40 mg/l. In addition, the 30-day average percent removal rate cannot be less than 85%. Influent BOD_5 concentrations averaged 261 mg/l, while the effluent monthly $CBOD_5$ concentrations averaged 2 mg/l. Average monthly BOD percent removal rates ranged from 97.6% to 99.3% with an overall annual removal rate of 99.0%. All permit limits were met.

Table 6-3: Biochemical Oxygen Demand Effluent Concentration and Loading, 2012
York City Wastewater Treatment Plant

Month	Influent	Effluent					
	Average (mg/l)	Average Monthly (mg/l)	Max. Avg. Weekly (mg/l)	Maximum Daily (mg/l)	Average Monthly (lbs/day)	Max. Avg. Weekly (lbs/day)	Average Percent Removal
January	256	2	3	3	211	237	99.1
February	313	2	2	3	181	191	99.3
March	303	2	2	2	174	181	99.3
April	300	2	2	4	174	214	99.3
May	300	2	2	3	179	197	99.3
June	259	2	2	2	181	198	99.2
July	247	3	4	6	211	320	99.0
August	241	2	3	4	215	274	99.0
September	221	2	2	3	204	240	99.0
October*	218	4	9	29	756	2831	97.6
November	228	2	2	5	237	285	98.9
December	257	2	2	2	179	209	99.2
Annual Average	261	2	N/A	N/A	N/A	N/A	99.0

Permit Limits:
- May through October: average monthly 15 mg/l, average weekly 22 mg/l, instantaneous maximum 30 mg/l, average monthly 3,253 lbs/day, average weekly 4,879 lbs/day.
- November through April: average monthly 20 mg/l, average weekly 30 mg/l, instantaneous maximum 40 mg/l, average monthly 4,337 lbs/day, average weekly 6,505.
- 30-day average percent removal shall not be less than 85%.

*The influent flow meter was out of service October 29-30, 2012: effluent flow meter values were used to estimate influent flows on those two days. Therefore, the calculated pounds per day for the monthly average and the maximum weekly average are estimated calculations.

Total suspended solids effluent concentrations are shown in Table 6-4. Effluent permit limits for this parameter are as follows: monthly average effluent limit of 30 mg/l and 6,505 lbs/day, weekly average of 45 mg/l and 9,758 lbs/day, and instantaneous maximum concentration of 60 mg/l. Monthly influent concentrations averaged 263 mg/l, while effluent concentrations averaged 3 mg/l. The NPDES permit requires a 30-day average removal rate of at least 85% of suspended solids; monthly average suspended solids percent removal rates ranged from 98.0% to 99.4% for an overall removal rate of 98.9%. Because the influent flow meter was out of service October 29-30, 2012 during tropical Storm Sandy, effluent meter flow values were used to estimate influent flows on those two days. Therefore, the calculated pounds per day for the October 2012 monthly average and the maximum weekly average are estimates. One permit excursion occurred in 2012. The average weekly loading of 9,758 lbs/day was exceeded in October 2012 due to the remnants of Tropical Storm Sandy with an estimated value of 11,026 lbs/day. An estimated 6.07 inches of rain fell on October 29-30, 2012 due to Tropical Storm Sandy. Flows at the treatment plant reached 69.3 mgd in the late hours of October 29, 2012.

Table 6-4: Total Suspended Solids Concentration and Loading, 2012
York City Wastewater Treatment Plant

Month	Influent	Effluent					
	Average (mg/l)	Average Monthly (mg/l)	Max. Avg. Weekly (mg/l)	Max. Daily (mg/l)	Average Monthly (lbs/day)	Max. Avg. Weekly (lbs/day)	Percent Removal
January	259	3	5	8	280	433	98.8
February	317	2	2	5	177	234	99.3
March	324	2	2	5	154	182	99.4
April	294	2	3	5	167	265	99.1
May	327	2	2	3	147	259	99.4
June	240	2	2	6	177	186	99.1
July	226	2	3	4	194	249	98.9
August	235	4	8	14	354	659	98.2
September	226	2	2	5	174	244	98.9
October*	227	9	35	111	2,518	**11026**	98.0
November	228	2	2	11	247	209	98.8
December	249	1	1	4	123	159	99.3
Annual Average	263	3	N/A	N/A	N/A	N/A	98.9

Permit Limits:
- average monthly 30 mg/l, average weekly 45 mg/l, instantaneous maximum 60 mg/l, average monthly 6,505 lbs/day, average weekly 9,758 lbs/day.
- 30-day average percent removal shall not be less than 85%.
*The influent flow meter was out of service October 29-30, 2012: effluent flow meter values were used to estimate influent flows on those two days. Therefore, the calculated pounds per day for the monthly average and the maximum weekly average are estimated calculations.

Phosphorous effluent concentrations for the treatment plant are summarized in Table 6-5. Permit limitations for phosphorous are: 2.0 mg/l and 434 lbs/day monthly average, and 4.0 mg/l instantaneous maximum. Influent concentrations averaged 4.4 mg/l and effluent concentrations averaged 1.0 mg/l. Average monthly percent removal rates ranged from 46.0% to 84.5% for an overall annual average removal rate of 74.1%. All permit limits were met.

Table 6-5: Phosphorus Effluent Concentration and Loading, 2012
York City Wastewater Treatment Plant

Month	Influent	Effluent			
	Average (mg/l)	Average (mg/l)	Max. Daily (mg/l)	Average (lbs/day)	Percent Removal
January	4.1	0.7	2.3	70.2	81.6
February	4.9	1.4	4.0	121.0	68.0
March	4.9	0.7	1.5	58.3	84.5
April	4.9	0.8	2.9	66.6	80.5
May	4.8	1.7	4.2	149.5	61.6
June	4.5	0.9	2.7	78.5	78.0
July	4.1	0.8	3.3	70.5	77.9
August	4.1	0.7	3.0	60.8	82.1
September	3.8	1.0	4.3	100.7	68.2
October*	3.9	1.0	6.3	195.1	78.4
November	3.9	0.6	3.0	62.5	82.9
December	4.4	2.0	4.6	176.9	46.0
Annual Average	4.4	1.0	N/A	N/A	74.1

Permit Limits:
- average monthly 2.0 mg/l and 434 lbs/day, instantaneous maximum 4.0 mg/l.

*The influent flow meter was out of service October 29-30, 2012: effluent flow meter values were used to estimate influent flows on those two days. Therefore, the calculated pounds per day for the monthly average is an estimated calculation.

Ammonia-nitrogen concentrations are summarized in Table 6-6. Ammonia-nitrogen permit limitations vary seasonally and generally permit higher concentrations in the cooler months and lower concentrations in the warmer months. For May through October ammonia-nitrogen permit limitations are: 1.7 mg/l and 369 lbs/day monthly average, and 3.4 mg/l instantaneous maximum. For November through April permit limitations are: 2.1 mg/l and 455 lbs/day monthly average, and 4.2 mg/l instantaneous maximum. Influent concentrations averaged 17.8 mg/l. The average monthly average effluent concentration was 0.3 mg/l. The average monthly ammonia-nitrogen removal rate ranged between 94.4% and 99.3% for an overall removal rate of 98.3%. All permit limits were met.

Table 6-6: Ammonia-Nitrogen Effluent Concentration and Loading, 2012
York City Wastewater Treatment Plant

Month	Influent	Effluent			
	Average (mg/l)	Average (mg/l)	Max. Daily (mg/l)	Average (lbs/day)	Percent Removal
January	17.1	0.2	0.6	17	98.9
February	19.2	0.1	0.4	13	99.1
March	18.5	0.1	0.3	11	99.2
April	20.0	0.2	1.3	14	99.0
May	17.6	0.1	0.2	9	99.3
June	19.1	0.4	1.5	36	97.7
July	17.9	0.2	1.2	15	99.0
August	16.9	0.9	8.0	79	94.4
September	17.4	0.2	0.8	16	99.0
October*	16.3	0.5	7.6	128	97.1
November	14.8	0.2	0.8	16	98.8
December	18.6	0.3	2.5	33	97.5
Annual Average	17.8	0.3	N/A	N/A	98.3

Permit Limits:
- May through October: average monthly 1.7 mg/l and 369 lbs/day, instantaneous maximum 3.4 mg/l.
- November through April: average monthly 2.1 mg/l and 455 lbs/day, instantaneous maximum 4.2 mg/l.

*The influent flow meter was out of service October 29-30, 2012: effluent flow meter values were used to estimate influent flows on those two days. Therefore, the calculated pounds per day for the monthly average is an estimated calculation.

Annual net total nitrogen and annual net total phosphorus data are summarized in Table 6-7. Annual net total nitrogen and annual net total phosphorus data reporting requirements became effective October 1, 2011 with annual data reporting beginning October 1 through September 30 of each year starting with the first full year of reporting. The year 2012 is the first year of full reporting. The October 1 through September 30 annual cycle is the northern hemisphere's 'water year'. Water years are used for processing data related to stream flow and other hydrologic data: they start with the season of most groundwater recharge and end with the season of maximum evaporation or water loss.

The annual net total nitrogen permit limit is 474,880 pounds, and the annual net phosphorus permit limit is 63,317 pounds. The 2012 annual net total nitrogen loading was 2921,364 pounds and the annual net phosphorus mass load was mass 32,051 pounds. During the 2012 compliance year, the annual net nitrogen and annual net phosphorus loadings did not exceed permit limits. October 2012 through December 2012 data are presented to provide a full calendar year of data: the three months of data are not included in the annual water year totals as per permit requirements, but will be included in the 2013 compliance year.

Table 6-7: Annual Net Nitrogen and Phosphorus Loading, October 2011 to September 2012
York City Wastewater Treatment Plant

Month	Monthly Net Mass Load (lbs)	
	Total Nitrogen	Total Phosphorus
October 2011	34176	2772
November 2011	32047	3679
December 2011	28138	2027
January 2012	21646	2176
February 2012	23208	3509
March 2012	16695	1806
April 2012	19306	1999
May 2012	22728	4636
June 2012	25980	2355
July 2012	24632	2187
August 2012	21083	1885
September 2012	22725	3020
Annual Net Mass Load	**292364**	**32051**
October 2012	28070	3312
November 2012	22884	1874
December 2012	17607	5484

Permit Limits:
-annual net mass load for nitrogen: 474,880 pounds.
-annual net mass load for phosphorus: 63,317 pounds.

Table 6-8, Table 6-9, and Table 6-10 summarize treatment plant influent, effluent, and biosolids local limit data, respectively, for the years 2010 through 2012. No data trends are apparent except that results are consistent over time. Parameter goals changed in 2011 due to an updated local limits evaluation. Only current goals are shown. Given the minimum detection limit for some analyses, all influent, effluent, and biosolids goals were consistently met for the last three years.

Table 6-8:Comparison of Local Limit Influent Data, 2010-2012

York City Wastewater Treatment Plant

Date	Arsenic	Cadmium	Chromium	Copper	Cyanide	Lead	Mercury	Molybdenum	Nickel	Oil and Grease	Selenium	Silver	Zinc
3/2/2010	<0.05	<0.005	<0.05	<0.05	<0.04	<0.05	<0.0002	<0.05	<0.05	73.0	<0.05	<0.02	<0.10
4/21/2010	<0.05	<0.005	<0.05	<0.05	<0.005	<0.05	<0.0002	<0.05	<0.05	51.0	<0.05	<0.02	0.10
5/26/2010	<0.0050	<0.0010	0.0028	0.050	<0.0050	0.0082	<0.00050		<0.010		<0.010	<0.0020	0.13
5/26/2010					<0.005								
8/25/2010	<0.0050	<0.0010	0.0076	0.058	<0.0050	0.0110	<0.00050	0.024	0.0078	30.1	<0.0020	0.0016	0.13
11/10/2010	<0.0050	<0.0010	0.0035	0.055	<0.0050	0.0057	<0.00050	0.028	0.0066	26.1	<0.0040	<0.0020	0.12
2/16/2011	<0.0050	<0.0010	0.0040	0.044	<0.0050	0.0049	<0.00050	0.028	0.0068	113	<0.0020	0.0011	0.12
5/11/2011	<0.0050	<0.0010	0.0042	0.042	<0.0050	0.0094	<0.00050	0.028	0.0042	37.1	<0.0020	0.0025	0.13
5/11/2011	<0.0050	<0.0010	0.0033	0.033	<0.0050	0.0068	<0.00050		<0.010		<0.010	<0.0020	0.10
8/24/2011	<0.0050	<0.0010	0.0025	0.055	<0.0050	0.011	<0.00050	0.024	0.0047	31.3	<0.0020	0.0012	0.14
12/7/2011	<0.0050	<0.0010	0.0026	0.042	<0.0050	0.0074	<0.00050	0.024	0.0031	31.1	<0.0020	0.0012	0.11
2/1/2012	<0.0050	<0.0010	0.0024	0.050	<0.0050	0.0073	<0.00050	0.022	0.0031	39.3	0.0058	0.0014	0.11
5/31/2012	<0.0050	<0.0010	0.0027	0.071	<0.0050	0.011	<0.00050	0.026	0.0043	8.2	<0.0020	0.0013	0.17
5/31/2012	<0.0050	<0.0010	0.0030	0.062	<0.0050	0.011	<0.00050		<0.010		<0.010	0.0023	0.16
8/22/2012										20.6			
8/23/2012	<0.0050	<0.0010	0.0023	0.050	<0.0050	0.011	0.00023	0.032	0.0036		<0.0020	<0.0010	0.11
12/12/2012	<0.0050	<0.0010	0.0039	0.051	<0.0050	0.0083	0.00021	0.033	0.0067	127	0.0022	<0.0010	0.13
Goal	0.017	0.0041	0.1616	0.183	0.057	0.0407	0.0014	0.04	0.1059	No Goal	0.028	0.1374	0.5234
Average	0.01	0.001	0.01	0.05	0.004	0.01	0.0002	0.03	0.01	49	0.01	0.00	0.12
Maximum	<0.05	<0.005	<0.05	0.071	<0.04	<0.05	<0.00050	<0.05	<0.05	127	<0.05	<0.02	0.17
Minimum	<0.0050	<0.0010	0.0023	0.050	<0.0050	0.0110	<0.0002	0.022	0.0031	8.2	<0.0020	<0.0010	<0.10

Notes: Results reported in mg/l. Non-detectable results are reported as "<" less than the test detection limit. Values of one-half the detection limit were used to calculate averages.
Bolded results indicate goal exceedance.
Parameter goals changed in 2011. Only current goals are shown.

Table 6-9:Comparison of Local Limit Effluent Data, 2010-2012

York City Wastewater Treatment Plant

Date	Arsenic	Cadmium	Chromium	Copper	Cyanide	Lead	Mercury	Molybdenum	Nickel	Oil and Grease	Selenium	Silver	Zinc
3/2/2010	<0.05	<0.005	<0.05	<0.05	<0.04	<0.05	<0.0002	0.060	<0.05	<5	<0.05	<0.02	<0.10
4/21/2010	<0.05	<0.005	<0.05	<0.05	<0.005	<0.05	<0.0002	<0.05	<0.05	41*	<0.05	<0.02	<0.10
5/26/2010										<2.2			
5/26/2010					<0.005								
6/23/2010										<2.1			
7/6/2010										<2.2			
8/25/2010	<0.0050	<0.0010	0.0033	<0.0050	<0.0050	<0.0030	<0.00050	0.022	0.0083	<2.1	<0.0020	<0.0010	0.035
9/22/2010										<2.1			
11/10/2010	<0.0050	<0.0010	<0.0010	<0.0050	<0.0050	<0.0030	<0.00050	0.024	0.0037	<2.1	<0.0020	<0.0010	0.042
2/16/2011	<0.0050	<0.0010	0.0013	<0.0050	<0.0050	<0.0030	<0.00050	0.024	0.0044	<2.1	<0.0020	<0.0010	0.051
5/11/2011	<0.0050	<0.0010	0.0014	<0.0050	<0.0050	<0.0030	<0.00050	0.027	<0.0025	<2.1	<0.0020	<0.0010	0.038
8/24/2011	<0.0050	<0.0010	<0.0010	<0.0050	<0.0050	<0.0030	<0.00050	0.022	0.0029	2.3	<0.0020	<0.0010	0.035
12/7/2011	<0.0050	<0.0010	<0.0010	<0.0050	<0.0050	<0.0030	<0.00050	0.026	<0.0025	<2.0	<0.0020	<0.0010	0.034
2/1/2012	<0.0050	<0.0010	<0.0010	<0.0050	<0.0050	<0.0030	<0.00050	0.021	<0.0025	2.4	<0.0020	<0.0010	0.037
5/31/2012	<0.0050	<0.0010	<0.0010	<0.0050	<0.0050	<0.0030	<0.00050	0.029	0.0029	<2.1	<0.0020	<0.0010	0.034
8/22/2012	<0.0050	<0.0010	<0.0010	<0.0050	<0.0050	0.0034	<0.00020	0.022	<0.0025	<2.1	<0.0020	<0.0010	0.027
11/12/2012					<0.0050								
12/12/2012	<0.0050	<0.0010	0.0016	<0.0050	<0.0050	0.0051	<0.00020	0.081	0.0059	<2.3	<0.0020	<0.0010	0.048
Goal	0.034	0.0014	0.034	0.0497	0.0177	0.021	0.0002	No Goal	0.2764	No Goal	0.017	0.0317	0.6353
Average	0.01	0.001	0.01	0.01	0.004	0.01	0.0002	0.03	0.01	4	0.01	0.002	0.04
Maximum	<0.05	<0.005	<0.05	<0.05	<0.04	<0.05	<0.00050	0.081	<0.05	41*	<0.05	<0.02	<0.10
Minimum	<0.0050	<0.0010	<0.0010	<0.0050	<0.0050	<0.0030	<0.00020	0.021	<0.0025	<2.0	<0.0020	<0.0010	0.027

Notes: Results reported in mg/l. Non-detectable results are reported as "<" less than the test detection limit. Values of one-half the detection limit were used to calculate averages.
Bolded results indicate goal exceedance.
Parameter goals changed in 2011. Only current goals are shown.
*This oil and grease result is erroneous: an effluent with 41 mg/l would have produced a visible sheen, clogged the sand filtration system, coated the ultra-violet light fixtures and tubes and reduced disinfection - none of which occurred.

Table 6-10: Comparison of Local Limit Biosolids Data, 2010-2012
York City Wastewater Treatment Plant

Date	Arsenic	Cadmium	Chromium	Copper	Cyanide	Lead	Mercury	Molybdenum	Nickel	Oil and Grease	PCB	Selenium	Silver	Zinc
1/4/2010	3.23	1.46	20.9	282	<1	37.0	0.96	13.5	14.6			4.65		430
3/3/2010	2.57	2.48	22.9	251	<1	29.3	0.94	14.5	17.0			4.55		404
3/3/2010	<3.79	<3.79	17.1	298	<2.55	33.6	<1.00	15.6	19.0			<7.58	<7.58	492
4/21/2010	<7.84	<7.84	19.3	410	<2.8	37.3	<1.00	17.8	19.0			<7.84	11.5	497
5/2/2010	4.35	2.26	27.1	364	<1	48.0	1.84	18.4	22.2			6.18		527
5/26/2010	14.20	<2.7	33.7	361	<1.4	51.1	1.60		21.4			<27.4	14.5	531
7/1/2010	3.58	2.11	26.7	401	<1	52.6	1.18	21.6	20.6			6.07		599
8/25/2010	<9.5	<2.4	57.6	421	2.6	56.3	1.20	29.2	21.8			<23.8	13.6	667
9/7/2010	2.92	2.25	50.5	425.5	<1	56.9	1.41	26.2	18.8			3.88		632
11/3/2010	3.29	2.01	35.5	404	<1	51.6	0.97	23.2	17.1			4.83		647
11/10/2010	<10.5	<2.6	35.8	422	5.4	54.5	2.70	23.9	19.5			<26.2	11.8	667
1/6/2011	<1.99	1.53	24.1	278.4	<1	32.0	0.49	16.4	14.3		<1.37	4.11		433.7
2/16/2011	<9.5	<2.4	33.9	368	<1.4	45.0	<1.0	24.9	23.6	19,000		<23.7	10.0	552
3/1/2011	<1.91	1.45	19.9	280.9	<1	34.2	0.56	16.1	14.8		<1.35	3.12		391.5
5/9/2011	<2.54	2.60	22.4	344.8	<1	46.9	1.03	18.99	20.6			5.44		509.3
5/11/2011	<10.5	<2.6	28.1	352	<1.4	48.9	1.2	20.4	21.9	35,100		<26.2	10.0	532
5/11/2011	<10.3	<2.6	24.5	333	1.6	44.4	1.2		21.6		<0.35	<25.9	9.9	514
7/12/2011	3.37	2.59	26.8	403.5	<1	67.4	1.13	19.3	22.5		<0.15	5.73		638.6
8/23/2011	<11.1	<2.8	27.6	360	<1.4	60.3	<1.1	22.0	22.5	6,060		<27.8	17.6	649
9/1/2011	3.59	2.46	23.0	392.9	<1	66.3	0.96	23.51	20.4			6.28		723.1
11/1/2011	2.71	2.42	23.5	372.7	<1	62.3	1.33	20.6	19.1		<0.14	6.09		622.7
1/5/2012	2.87	2.07	21.8	378.6	<1	51.3	0.87	17.71	17.8		<0.15	7.92		550.0
2/2/2012	<11.9	<3.0	29.1	426	<1.6	53.4	<1.1	20.3	25.4	27,700		<29.9	12.6	606
3/1/2012	2.78	1.92	16.7	326.1	<1	40.0	1.33	14.84	15.7		<0.14	6.01		449.4
5/7/2012	4.03	3.16	26.8	517.8	<1	64.2	0.90	24.42	26.0		<0.2	6.41		711.4
5/31/2012	<12.0	3.0	31.0	450	<1.8	63.3	1.2	23.6	26.2	36,300		<30.0	13.2	670
5/31/2012	<11.0	<2.7	25.4	388	<1.6	55.2	1.1		22.2		<0.21	<27.4	11.3	563
7/2/2012	<2.87	2.77	23.3	464.6	<1	82.2	1.74	23.97	24.8		<0.18	7.35		684.0
8/22/2012	<11.4	2.8	26.6	492	<1.5	104	0.91	24.0	23.5	2,090		<28.4	13.1	779
9/3/2012	3.29	2.69	22.6	516.8	<1	91.5	0.83	24.01	22.0		<0.18	7.55		793.3
11/8/2012	3.43	2.28	22.2	489.4	<1	83.8	1.02	21.23	21.4		<0.15	6.18		710.1
12/11/2012	<11.6	<2.9	25.4	443	<1.5	75.2	2.3	20.2	25.8	37,800		<29.0	9.3	675
Goal	41	39	No Goal	1500	No Goal	300	17	75	420	No Goal	4	100	No Goal	2800
Average	4.1	2.0	27.3	390	1	56	1.1	20.8	20.8	23,436	0.2	8.7	11.6	592
Maximum	14.20	<7.84	57.6	517.8	5.4	104	2.70	29.2	26.2	37,800	<1.37	<30.0	17.6	793.3
Minimum	<1.91	1.45	16.7	251	<1	29.3	0.49	13.5	14.3	2,090	<0.14	3.12	<7.58	391.5

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.
Values of one-half the detection limit were used to calculate averages. Bolded results indicate goal exceedance.
Parameter goals changed in 2011. Only current goals are shown.

7. *Municipal Industrial Pretreatment Program §94.12 (a)(8)*

7.1. 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. [3, 4]

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.

7.2. Reporting Requirements

This section documents the activities of the City of York Municipal Industrial Pretreatment Program (MIPP) for reporting year 2012. 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 2012 reporting year pretreatment annual report guidance, which includes a program summary and various supporting attachments showing more detailed information.

---

3 40 CFR 401.12(f), 40 CFR 403.2

4 1996. Pretreatment Facility Inspection. 3rd ed. California State University, Sacramento.

7.3. 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: **Andy Jantzer**
Contact Title: **General Manager**
Contact Telephone Number: **717-845-2794**
E-mail address: **ajantzer@yorkcity.org, vwhaley@yorkcity.org**
NPDES No.: **PA0026263**
Permit Issuance Date: **2/1/2008** Permit Expiration Date: **1/31/2013 (extended)**
Reporting Period: **January 1, 2012 through December 31, 2012**
Total Categorical IUs (CIUs): **9**
Total "Middle Tier" CIUs (MTCIUs): **NA**
Total Nonsignificant CIUs (NSCIUs): **NA**
Total Significant Noncategorical IUs (SNIUs): **20**

II. Compliance Monitoring Program

1. Number of SIUs with current control documents..... **(one compliance order, one zero-discharge permit)** **31**
2. Number of SIU facilities inspected **31**
3. Number of SIU facilities sampled ..... **(No discharge from 2 facilities)** **29**
4. Number of SIUs submitting Self-Monitoring Reports **31**

III. Significant Industrial User Compliance

1. Number of SIUs violating a compliance schedule/Number on a schedule **0/3**
2. Number of SIUs in SNC for the July to December review period..... **0**
3. Number of SIUs in SNC at any time during calendar year **0**
4. Number of SIUs in SNC that were also in SNC during the pervious calendar year **0**
5. Number of NSCIUs that violated any standards or requirements ..... **NA**

IV. Enforcement Actions

1. Notices/Letters of Violation issued to SIUs **24**
2. Enforceable compliance schedules issued to SIUs **1**
3. Civil/criminal suits filed..... **(due to 2011 activity)** **1**
4. Number of SIUs from which penalties have been collected **1**
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.

Andrew Jantzer
Name of the Authorized Representative

Signature

General Manager of Wastewater Facilities
Title (print)

3-27-13
Date

7.4. Section I, General Information Attachments

A list of categorical industrial users (CIU) and significant non-categorical industrial users (SNIU), which matches the industries referenced in Section I of the Pretreatment Performance Summary, is provided in Table 7-1. Categorical industrial users with the potential to discharge are identified in the "classification" column with "CIU". 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 2012 year.

Some changes to the industrial user list were made since the 2011 annual report submission. Industries that were added to or deleted from the list are summarized below:

- **C D & E Refining**, a zero discharge centralized waste treatment facility, previously located at 730 Vogelsong Road Suite DPU, relocated to 1527 St. Paul Street (identified as 351 East Street in the York County geographic information system) March through June 2011. The structure is served by an on-lot septic system and is no longer in the regulatory jurisdiction of the City of York pretreatment program because the new facility is not an indirect discharger to the treatment plant. MIPP contacted PADEP and Spring Garden Township on March 16, 2011 regarding the relocation. The facility is deleted from the list.
- **Yorktowne Paperboard**, a paperboard manufacturer, ceased discharge in 2011 and is deleted from the list.

Other changes that occurred at industrial facilities since the 2011 annual report submission are summarized below:

- **EQ Holdings Inc.**, a centralized waste treatment facility, submitted their renewal permit application under the name **EQ Pennsylvania**. The facility's industrial wastewater discharge permit reflects this name.
- **Hess Gas Station #38254**, located at 253 South Queen Street, which did not have a completed groundwater remediation pretreatment system in 2009 or 2010, and only discharged seventy-seven (77) gallons of wastewater in 2011, is now fully on-line. Discharge commenced in June 2012.

Table 7-1: Categorical and Significant Noncategorical Industrial Users, 2012

ID#	Industrial User		Classification	Categorical Reference	Category	Control Document Issue/ Effective Date	Control Document Expiration Date	Control Document Issue/ Effective Date	Control Document Expiration Date
0088	American Ash Recycling	1072 Roosevelt Av	SI			10/1/2009	9/30/2012	10/1/2012	9/30/2015
0047	Bickel's Snack Foods – College Av	1000-1050 W College Av	SI			10/1/2009	9/30/2012	10/1/2012	9/30/2015
0045	Bickel's Snack Foods – Zinn's Quarry Rd	1120 Zinn's Quarry Rd	SI			10/1/2009	9/30/2012	10/1/2012	9/30/2015
0100	Cintas Corp.	1111 Smile Way	SI			7/1/2011	6/30/2014		
0083	Columbia Gas of Pennsylvania, Inc.	201 Grant St	SI			10/1/2009	9/30/2012	10/1/2012	9/30/2015
0019	Coyne Textile Services	3500 W Market St	SI			10/1/2009	9/30/2012	10/1/2012	9/30/2015
0021	Dentsply International Inc.	470 W College Av	CIU	40 CFR 433	metal finishing	10/1/2009	9/30/2012	10/1/2012	9/30/2015
0099	Dentsply Int'l. Professional Division	1301 Smile Way	SI			1/1/2012	12/31/2014		
0005	EQ Pennsylvania	730 Vogelsong Rd	CIU	40 CFR 437	centralized waste treatment	10/1/2009	9/30/2012	10/1/2012	9/30/2015
0105	First Capital Powder Coating	215 Herman St	CIU	40 CFR 433	metal finishing	11/19/2010	9/30/2013	10/1/2012	9/30/2015
0006	Frito-Lay, Inc.	3553 Gillespie Dr	SI			10/1/2009	9/30/2012	10/1/2012	9/30/2015
0106	Gamlet, Inc.	1750 Toronita St	CIU	40 CFR 433	metal finishing	12/22/2010	9/30/2013		
0098	Hess Gas Station 38254	253 S Queen St	SI			4/1/2010	3/31/2013		
0095	Johnson Controls Inc.- Grantley Campus	631 S Richland Av	SI			10/1/2009	9/30/2012	10/1/2012	9/30/2015
0041	New York Wire Company-Weaving Facility	441 E Market St	CIU	40 CFR 433	metal finishing	10/1/2009	9/30/2012	10/1/2012	9/30/2015
0069	New York Wire Company-Wire Facility	829 Loucks Mill Rd	CIU	40 CFR 433	metal finishing	10/1/2009	9/30/2012	10/1/2012	9/30/2015
0013	North Metal & Chemical Company	609 E King St	SI			10/1/2009	9/30/2012	10/1/2012	9/30/2015
0038	Osram Sylvania, Inc.	1128 Roosevelt Av	CIU	40 CFR 433	metal finishing	10/1/2009	9/30/2012	10/1/2012	9/30/2015
0089	Protech Powder Coatings Inc.	939 Monocacy Rd	SI			10/1/2009	9/30/2012	10/1/2012	9/30/2015
0085	RecOil, Inc.	280 North East St	CIU	40 CFR 437	centralized waste treatment	10/1/2009	9/30/2012	10/1/2012	9/30/2015
0018	Rutter's Dairy, Inc.	2100 N George St	SI			10/1/2009	9/30/2012	10/1/2012	9/30/2015
0092	Surtech Industries Inc	915 Borom Rd	CIU	40 CFR 433	metal finishing	10/1/2009	9/30/2012	10/1/2012	9/30/2015
0039	Warrell Classic Company, The	231 West College Av	SI			7/1/2009	6/30/2012	7/1/2012	6/30/2015
0103	WC Manufacturing Co LLC	615 South Pine St	SI			7/1/2011	6/30/2014		
0035	YGS Group, The	3650 W Market St	SI			10/1/2009	9/30/2012	10/1/2012	9/30/2015
0059	York County Solid Waste & Refuse Auth.	2651 Blackbridge Rd	SI			10/1/2009	9/30/2012	10/1/2012	9/30/2015
0070	York Newspaper Company	1891 Loucks Rd	SI			10/1/2009	9/30/2012	10/1/2012	9/30/2015
0034	York Wallcoverings Inc.- Linden Av	750 Linden Av	SI			10/1/2009	9/30/2012	10/1/2012	9/30/2015
0084	York Wallcoverings Loucks Rd Facility	2075 Loucks Road	SI			1/1/2012	12/31/2014		

CIU – Categorical Industrial User. SI – Significant Non-Categorical Industrial User. NSCIU – Non-Significant Categorical Industrial User.

7.5. Section II, Compliance Monitoring Program Attachments

Permits

As shown in Table 7-2, there were thirty-one (31) significant industrial users with current individual control documents (i.e., permits) in 2012. 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. AMZ Manufacturing Corp. was issued a zero-discharge permit December 11, 2009 and began submitting semi-annual certification statements in 2011. CP Industries was issued a compliance order and notice on September 21, 2009, which requires annual certification regarding wastewater generation and disposal. 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 or nonsignificant categorical industrial users (NSCIU) in 2012.

Inspections

The City of York inspected all facilities in 2012. A summary of 2012 inspection activities is provided in Table 7-2. A comprehensive annual inspection is conducted once per year. Observations are recorded using the annual inspection form. All facilities received an annual inspection

All three zero-discharge facilities were inspected in 2012: AMZ Manufacturing Corp., located at 2206 Pennsylvania Avenue; CP Industries, located at 785 West Philadelphia Street; and, RecOil, Inc., located at 260 North East Street. AMZ Manufacturing Corp. is a metal finishers under 40 CFR 433, CP industries is a soap and detergent manufacturer under 40 CFR 417, and RecOil, Inc. is a centralized waste treatment facility under 40 CFR 437. RecOil, Inc. holds an industrial wastewater discharge permit, but hauls all wastewater for off-site disposal.

Sampling

Wastewater samples were collected from twenty-nine (29) facilities. A summary of 2012 sampling activities is provided in Table 7-2. 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. Hess Gas Station #38254 commenced discharge June 5, 2012: because discharge started in the second quarter, only three quarterly samples were required for Hess Gas Station in 2012.

Two industries were not sampled by the City of York in 2012 due to zero-discharge status. CP Industries' permit was revoked in 2009, and the process wastewater line was capped: the facility certified that all wastewater was transported off-site in 2012. RecOil, Inc.'s wastewater is hauled off-site. Sanitary waste samples were obtained from AMZ Manufacturing Corp., a zero-discharge metal finisher.

Table 7-2: Compliance Monitoring Summary, 2012

ID#	Industrial User	Site Address	IU Sample Results	City of York Sample Results	Total Samples	Required IU Samples	Annual Inspections	Compliance Inspections	Total Inspections
0088	American Ash Recycling	1072 Roosevelt Av, York PA 17104	15	14	29	4	1	0	1
0057	AMZ Corp.*	2206 Pennsylvania Av, York PA 17404	0	3	3	0	1	0	1
0047	Bickel's Snack Foods - College Av	1000-1050 W College Av, York PA 17405	15	16	31	4	1	0	1
0045	Bickel's Snack Foods – Zinn's Quarry Rd	1120 Zinn's Quarry Rd, York PA 17405	14	16	30	4	1	0	1
0100	Cintas Corp.	1111 Smile Way, York PA 17404	4	17	21	4	1	0	1
0083	Columbia Gas of Pennsylvania, Inc.	201 Grant St, York PA 17401	4	8	12	4	1	0	1
0019	Coyne Textile Services	3500 W Market St, York PA 17404	23	16	39	4	1	0	1
0104	CP Industries[2]	785 W Philadelphia St, York PA 17404	2	0	2	0	1	0	1
0021	Dentsply International Inc.	470 W College Av, York PA 17404	11	13	24	4	1	0	1
0099	Dentsply Int'l. Professional Division	1301 Smile Way, York PA 17404	4	8	12	4	1	0	1
0005	EQ Pennsylvania[3]	730 Vogelsong Rd, York PA 17404	75	13	88	12	1	0	1
0105	First Capital Powder Coating	215 Herman St, York PA 17404	5	15	20	4	1	0	1
0006	Frito-Lay, Inc.	3553 Gillespie Dr, York PA 17404	52	50	102	4	1	0	1
0106	Gamlet, Inc.	1750 Toronita St, York PA 17402	5	14	19	4	1	0	1
0098	Hess Gas Station 38254[4]	253 S Queen St, York PA 17403	3	7	10	**4**	1	0	1
0095	Johnson Controls Inc.- Grantley Campus	631 S Richland Av, York PA 17405	4	15	19	4	1	0	1
0041	New York Wire Company - Weaving Facility	441 E Market St, York PA 17405	4	13	17	4	1	0	1
0069	New York Wire Company - Wire Facility	829 Loucks Mill Rd, York PA 17405	6	9	15	4	1	0	1
0013	North Metal & Chemical Company	609 E King St, York PA 17405	8	8	16	4	1	0	1
0038	Osram Sylvania, Inc.	1128 Roosevelt Av, York PA 17404	20	13	33	4	1	0	1
0089	Protech Powder Coatings Inc.	939 Monocacy Rd, York PA 17404	6	9	15	4	1	0	1
0085	RecOil, Inc.[5]	280 North East St, York PA 17403	0	0	0	0	1	0	1
0018	Rutter's Dairy, Inc.	2100 N George St, York PA 17404	12	12	24	4	1	0	1
0092	Surtech Industries Inc	915 Borom Rd, York PA 17404	8	9	17	4	1	0	1
0039	Warrell Classic Company, The	231 West College Av, York PA 17401	18	20	38	8	1	0	1
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	5	8	13	4	1	0	1
0059	York County Solid Waste & Refuse Authority	2651 Blackbridge Rd, York PA 17406	8	12	20	4	1	0	1
0070	York Newspaper Company	1891 Loucks Rd, York PA 17408	12	13	25	4	1	0	1
0034	York Wallcoverings Inc. - Linden Av	750 Linden Av, York PA 17405	6	13	19	4	1	0	1
0084	York Wallcoverings Loucks Rd Facility	2075 Loucks Rd, York PA 17402	4	12	16	4	1	0	1
	Total		**357**	**384**	**741**	**124**	**31**	**0**	**31**

[1]-Industry is a zero-discharge facility and is not required to sample.
[2]-Facility is under a standing compliance order and notice issued 9/21/2009 and cannot discharge: therefore, no wastewater samples were required. IU sampled for permit application, but did not discharge.
[3]-Samples that were split by this industry and sent to two independent laboratories are counted as two samples.
[4]-Discharge commenced in June 2012. Therefore, the first quarter was not sampled, and only three quarterly samples were required.
[5]-This facility has a permit, but all wastewater is hauled off-site: therefore, no wastewater samples are required.

7.6. Section III, Significant Industrial User Compliance Attachments

There were no significant industrial users in significant noncompliance (SNC) during the 2012 reporting period. Table 7-3 summarizes the review period evaluation. A copy of the 2012 public notice is located in Exhibit 7-1.

Table 7-3 Significant Industrial Users in SNC During 2012

Review Period	Industry	Criteria
1st review period October 2011 to March 2012	No industries in significant non-compliance.	
2nd review period January 2012 to June 2012	No industries in significant non-compliance.	
3rd review period April 2012 to September 2012	No industries in significant non-compliance.	
4th review period July 2012 to December 2012	No industries in significant non-compliance.	

All categorical zero-discharge facilities were compliant in 2012.

There were no industrial users classified as non-significant categorical industrial users (NSCIU) in 2012.

There were no significant industrial users on written "informal" compliance schedules.

Three significant industrial users are under formal compliance schedules. All three facilities were in compliance with their formal compliance schedules in 2012. Frito Lay was issued an administrative compliance order on March 8, 2007, which has been renewed annually. The latest annual renewal expired December 31, 2011 and was reissued January 1, 2012 for the 2012 year. Frito Lay gathered water use and production data, which was evaluated by the City of York so the order can be lifted. The details of the order and facility status are discussed in the attachments to Section IV, Enforcement Actions Attachments. CP Industries was issued a standing compliance order and notice on September 21, 2009, which included a revocation of their industrial wastewater discharge permit. The details of the order and facility status are discussed in the attachments to Section IV, Enforcement Actions Attachments. Rutter's Dairy, Inc.'s permit was amended to include slug discharge control interim and final corrective action plans to address floor drains in a new fructose and sucrose storage room: compliance due dates were included in the permit amendment. The floor drains in the storage room are required to be rerouted to the pretreatment system. Rutter's Dairy, Inc. met the interim corrective action plan deadlines, and is on target for complying with the final corrective action plan. Details of the permit amendment are discussed in the attachments to Section IV, Enforcement Actions Attachments.

Exhibit 7-1: Significant Non-Compliance Newspaper Notice

Proof of Publication
State of Pennsylvania

AD # 0001337975-01

The York Dispatch/York Sunday News and York Daily Record are the names of the daily 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:

3/15/2013

NOTICE OF INDUSTRIES IN SIGNIFICANT NON-COMPLIANCE

The City of York reports, in a accordance with the United States Environmental Protection Agency regulation of 40 CFR 403.8(f)(2)(viii), that there were no industries in Significant Non-compliance (SNC) of environmental wastewater pretreatment requirements or pre-treatment standards during the calendar year 2012. The City of York Wastewater Treatment Plant serves 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, 2011 to March 31, 2012.
No industries in significant non-compliance.

2nd review period: January 1, 2012 to June 30, 2012.
No industries in significant non-compliance.

3rd review period: April 1, 2012 to September 30, 2012.
No industries in significant non-compliance.

4th review period: July 1, 2012 to December 31, 2012.
No industries in significant non-compliance.

Andrew Jantzer
General Manager of Wastewater Facilities
City of York Wastewater Treatment Plant

COMMONWEALTH OF PENNSYLVANIA
COUNTY OF YORK

Before me, a Notary Public, personally came
Linda Smith who being duly sworn deposes and says that she is the Layout Supervisor 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 15 day of March 2013

Sharon K. Wentz } Linda Smith

Notary Public

COMMONWEALTH OF PENNSYLVANIA
Notarial Seal
Sharon K. Wentz, Notary Public
West Manchester Twp., York County
My Commission Expires March 1, 2017
MEMBER, PENNSYLVANIA ASSOCIATION OF NOTARIES

The charge for the following publication of above mentioned advertisement and the expense of the affidavit.

Advertisement Cost	$212.60
Affidavit Fee	5.00
Total Cost	$217.60

7.7. Section IV, Enforcement Actions Attachments

Enforcement Actions Summary

A list of significant industrial users that received written notices of violation in 2012 and the number of violations issued to each user is provided in Table 7-4. 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 2012, 24 notices of violation were sent to industrial users, down from 31 NOVs in 2011, 38 NOVs in 2010, 56 NOVs in 2009, 64 NOVs in 2008 and 110 NOVs in 2007.

Administrative Order

One administrative order was issued in 2012. As shown in Table 7-4 Frito Lay, Inc. received one administrative compliance order (Exhibit 7-2). This order was included in the 2011 annual report. A renewed order was issued January 1, 2012 and expired December 31, 2012. The administrative order required Frito Lay to continue to document its water usage and submit flow figures with monetary penalties for failure to comply. Frito Lay implemented water conservation measures at its facility, which in turn increased its biochemical oxygen demand (BOD) concentrations (without increasing the mass loading) and caused them to violate the 3,000 mg/l BOD limit. The previous sanitary sewer use ordinance did not allow the conversion of concentration based local limits into mass loadings or the use of other means to address the issue. Progressive enforcement against Frito Lay for BOD violations would essentially punish a large water-using industry for implementing water resource conversation measures. Updated sewer use ordinances complying with pretreatment streamlining regulations, which also allow conversion of concentration based local limits into loadings among other methods, were approved by USEPA on April 5, 2011. Frito Lay has gathered and submitted multi-year water use and production data. The data was evaluated in late 2012 so the order could be lifted either *via* converting concentration limits into mass loadings or due to a lack of need stemming from some production and treatment changes that Frito Lay has since implemented. Of 102 sample results in 2012, Frito Lay had three BOD violations (zero BOD violations in 2011). Frito Lay has since implemented some production and pretreatment changes. The order was not reissued for the 2013 calendar year. (In 2007 when the original administration compliance order was issued Frito Lay had eighteen BOD violations.)

Standing Compliance Order and Notice, Criminal Citation

CP Industries performs two distinctly different operations: liquid soap and detergent manufacture, which is a categorical process, and rock salt preparation and packaging. The facility is under a standing compliance order and notice issued on September 21, 2009 (included in the 2009 annual report). The industrial wastewater discharge permit was revoked and the industrial wastewater discharge line near the basement wastewater collection pit was capped through the compliance order and notice. The compliance order and notice was issued due to repeated failures of the industry to provide required reports and to provide those reports in a timely fashion, failure to address wastewater quality issues, and frequent significant non-compliance status. The facility is not permitted to discharge process wastewater: an annual certification statement regarding wastewater generation and disposal must be submitted.

In 2011 the facility illegally connected wastewater discharge tanks to the sanitary sewer system in violation of the standing 2009 order and after an industrial wastewater permit application was denied earlier in the year. A Cease and Desist Order was issued during the December 14, 2011 inspection: staff waited on-site while the facility removed a section of pipe connected to the sanitary sewer line. The timeline for compliance was with the Cease and Desist Order was "immediate". Staff returned the following day to ensure the line was capped: the timeline for compliance for this item was noon, December 15, 2011. A non-traffic summary citation (criminal) was filed in January 12, 2012 for the December 2011 event. The facility appealed the Cease and Desist Order and filing or the citation to the

Sanitary Sewer Board of Appeals, and requested an extension for the appeal. Before the appeal was heard, the facility plead guilty and paid a fine plus costs totaling $2,081. The September 21, 2009 compliance order and notice is still in effect. The facility submitted a permit application in 2012: a permit will be issued in 2013 with restrictions.

Permit Amendment for Potential Slug Discharge Control

Rutter's Dairy, Inc.'s permit was amended to include slug discharge control interim and final corrective action plans to address floor drains in a new fructose and sucrose storage room: compliance due dates were included in the permit amendment. No spill occurred at the facility: the slug discharge control action plans were required to prevent such an occurrence. The amended permit was issued December 21, 2012. Interim corrective actions included instituting temporary measures to prevent slug discharges to the sanitary sewer through physical and procedural actions and preventing sweetener material spillage. Rutter's Dairy, Inc. met the interim corrective action written plan and implementation deadline of December 28, 2012. Final corrective actions address permanently redirecting potential spill and wash waters from the sanitary sewer lateral to the pretreatment system, and permanently capping/rendering inoperable the sanitary sewer lateral drains. The facility submitted a written final corrective action plan by the January 31, 2013 deadline and is on target for implementing the final corrective action plan by April 30, 2013. The facility has one of the best pretreatment program compliance histories with only one parameter violation and no reporting violations extending back to 1993.

Penalties Assessed and Collected, Criminal Citations

Due to the CP Industries criminal citation, $2,081.00 in penalties were assessed and collected in 2012.

Table 7-4: Enforcement Actions Summary, 2012

		Parameter Violations							Other Permit Violations		Enforcement Actions			
ID#	Industrial User	Biochemical Oxygen Demand	Copper, total	Cyanide, total	Lead, total	Oil & Grease (Hexane)	pH	Zinc, total	Reporting	Other	NOVs Issued	Citations Issued	Orders Issued	Penalties Collected
0088	American Ash Recycling				1						1			$0.00
0045	Bickel's Snack Foods – Zinns Quarry Rd	3									3			$0.00
0104	CP Industries*										0	1		$2,081.00
0100	Cintas					1				1	2			$0.00
0019	Coyne Textile Services		1	1	2						4			$0.00
0006	Frito-Lay, Inc.	3									3		1	$0.00
0106	Gamlet, Inc.							1			1			$0.00
0038	Osram Sylvania, Inc.						1				1			$0.00
0018	Rutter's Dairy Inc.									1	1		1	$0.00
0039	Warrell Classic Company						4				4			$0.00
0035	YGS Group, The							2			2			$0.00
0070	York Newspaper Co.					1					1			$0.00
0020	Yorktowne Paperboard Corp.								1		1			$0.00
	Total	6	1	1	3	2	5	3	1	2	24	1	0	$2,081.00

N.B.- There were no violations for the following local limits: arsenic, cadmium, chromium, cyanide, mercury, molybdenum, nickel, selenium, silver, temperature, flashpoint.
Each parameter violation is issued a separate notice of violation.
Some NOVs may not have been enforced until 2013.
* - Citation issued in January 2012 for violation of December 2011.

Exhibit 7-2: Frito Lay Administrative Compliance Order

The City of York Pennsylvania

Municipal Industrial Pretreatment Program
1625 Toronita Street, York, PA 17402
www.yorkcity.org

Department of Public Works
Wastewater Treatment Plant
Phone: 717-854-0358
Fax: 717-845-1353

Honorable Kim C. 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. evaluated its facility procedures and manufacturing processes and, as a result, implemented physical improvements and procedural controls to mitigate those factors contributing to excessive BOD concentrations; and

3. Whereas, Frito Lay, Inc., documented the above activities in correspondence dated November 22, 2006 and December 22, 2006, and met with City of York representatives on November 16, 2006 and December 20, 2006 to discuss these measures; and

4. 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

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 no mechanism in the City of York Codified Ordinance 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, the City of York is currently revising its sewer use ordinance to comply with changes in Federal pretreatment program regulations and is evaluating increasing the current BOD limit, and Frito Lay, Inc. has demonstrated that it has investigated contributing factors to the BOD violations due to manufacturing processes and procedures as well as water conservation efforts.

8. 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 relates strictly to BOD violations due to continued documented water conservation efforts.

Therefore, based on the above findings, Frito Lay, Inc. is ordered to:

1. Submit within 5 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 10th 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 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, 2012 and shall expire on December 31, 2012.

SAED

12-21-2011

Steven Douglas, General Manager, York City WWTP — Date

Industries in SNC Not Subject to Additional Enforcement

The purpose of this section is to discuss the industries that were in significant non-compliance, but were not subject to additional enforcement. Since there were no industries in significant non-compliance in 2012, this section is addressed.

7.8. Part B: Pretreatment Developments

7.8.1. Summary of POTW Operations

Interference, Upset, Permit Violations

There were no upsets or interferences due to industrial causes at the City of York Wastewater Treatment Plant during 2012. The City of York continues to produce a high quality effluent. Biosolids are land applied for beneficial reuse. Loadings at the facility remain steady.

The York City Wastewater Treatment Plant met all permit requirements in 2012 with three exceptions. On August 6, 2012 the Train 2 effluent screw pumps and sand filter system lost power and the recirculation pumps in Train 3 malfunctioned. On August 7, 2012 the treatment plant discharged partially treated sewage due to loss of electrical power to the ultra-violet light disinfection system. Upon discovery flows were diverted to Train 2 and to the 001 outfall and emergency disinfection was placed in service. The plant returned to normal operation about eight hours later after an electrical breaker was found to be off causing the loss of power to the ultra-violet light disinfection building. The estimated volume of un-disinfected plant effluent discharged from outfall 002 during the event was 9.0 million gallons. The estimated volume of plant effluent disinfected with sodium hypochlorite discharged from outfall 001 during the event was 2.0 million gallons. The Pennsylvania Department of Environmental Protection (PADEP) issued a notice of violation for the August 2012 events. During the fifth week of October 2012, the maximum average weekly total suspended solids (TSS) limit was exceeded due to Tropical Storm Sandy. Appendix K contains correspondence between the City of York and PADEP for the August events, as well as City of York correspondence regarding the October 2012 maximum average weekly TSS exceedance.

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 7-5 through Table 7-77. Influent, effluent, and biosolids analytical results are included in Appendix J. Monthly average influent concentrations are provided for BOD, ammonia-nitrogen, phosphorus, and total suspended solids. The City of York Wastewater Treatment Plant met influent and biosolids goals in 2012. One PCB influent sample had an insufficient minimum detection limit. Method 608, which can obtain a minimum detection limit of 0.000065 mg/l, was used; however, due to sample matrix interference the laboratory used a sample dilution, which in turn resulted in an increased minimum detection limit as per method protocol. Two mercury effluent samples – for the first two quarters of 2012 - had insufficient minimum detection limits. The City of York was informed that a lower effluent mercury minimum detection limit was required in EPA's 2011 annual report correspondence dated July 13, 2012. The City of York rectified the issue by changing the mercury analytical method to one with a consistently lower minimum detection limit, which is evidenced in the last two quarters of 2012.

Table 7-5: Priority Pollutant Influent Goals Data Summary, 2012*
York City Wastewater Treatment Plant

Parameter Code	Influent Pollutant	Goal	Frequency Per Year	2/1/2012	3/28/2012	5/31/2012	8/23/2012	12/12/2012	1/2012	2/2012	3/2012	4/2012
34506	1-1-1-Trichloroethane	Monitor	1			<0.0010						
01002	Arsenic – Total	0.017	4	<0.0050		<0.0050	<0.0050	<0.0050				
34030	Benzene	Monitor	1			<0.0010						
39100	Bis (2-ethylhexyl) Phthalate	0.5058	1			0.216						
00310	BOD- 5-day	699.772	4						256	313	303	300
01027	Cadmium – Total	0.0041	4	<0.0010		<0.0010	<0.0010	<0.0010				
32106	Chloroform	Monitor	1			<0.0028						
01034	Chromium – Total	0.1616	4	0.0024		0.0029	0.0023	0.0039				
01042	Copper – Total	0.183	4	0.050		0.067	0.050	0.051				
00720	Cyanide – Total	0.057	4	<0.0050		<0.0050	<0.0050	<0.0050				
34371	Ethylbenzene	Monitor	1			<0.0010						
01051	Lead – Total	0.0407	4	0.0073		0.011	0.011	0.0083				
71900	Mercury – Total	0.0014	4	<0.00050		<0.00050	0.00023	0.00021				
34423	Methylene Chloride	Monitor	1			<0.0010						
01062	Molybdenum – Total	0.04	4	0.022		0.026	0.032	0.033				
01067	Nickel – Total	0.1059	4	0.0031		0.0043	0.036	0.0067				
00610	Nitrogen – Ammonia	60.3248	0						17.1	19.2	18.5	20.0
00630	Nitrogen – Total	72.5	0		27.0							
04166	PCB- Total	0.0005	1		<0.00049	<0.0053						
34694	Phenol – Single Compound	Monitor	1			<0.0086						
00665	Phosphorus – Total	19.2959	0						4.1	4.9	4.9	4.9
01147	Selenium – Total	0.028	4	0.0058		<0.0020	<0.0020	0.0022				
01077	Silver - Total	0.1374	4	0.0014		0.0018	<0.0010	<0.0010				
00530	Solids – Total Suspended	723.898	0						259	317	324	294
34475	Tetrachloroethylene	Monitor	1			<0.0010						
34010	Toluene	Monitor	1			0.0085						
39180	Trichloroethylene	Monitor	1			0.0011						
01092	Zinc – Total	0.5234	4	0.11		0.17	0.11	0.13				

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., '3/2012') reflect monthly averages as per EPA annual report guidance.
* Table continued on next page.

Table 7-5 continued: Priority Pollutant Influent Goals Data Summary, 2012

York City Wastewater Treatment Plant

Parameter Code	Influent Pollutant	Goal	Frequency Per Year	5/2012	6/2012	7/2012	8/2012	9/2012	10/2012	11/2012	12/2012
34506	1-1-1-Trichloroethane	Monitor	1								
01002	Arsenic – Total	0.017	4								
34030	Benzene	Monitor	1								
39100	Bis (2-ethylhexyl) Phthalate	0.5058	1								
00310	BOD- 5-day	699.772	4	300	259	247	241	221	218	225	257
01027	Cadmium – Total	0.0041	4								
32106	Chloroform	Monitor	1								
01034	Chromium – Total	0.1616	4								
01042	Copper – Total	0.183	4								
00720	Cyanide – Total	0.057	4								
34371	Ethylbenzene	Monitor	1								
01051	Lead – Total	0.0407	4								
71900	Mercury – Total	0.0014	4								
34423	Methylene Chloride	Monitor	1								
01062	Molybdenum – Total	0.04	4								
01067	Nickel – Total	0.1059	4								
00610	Nitrogen – Ammonia	60.3248	0	17.6	19.1	17.9	16.9	17.4	16.3	14.8	18.6
00630	Nitrogen – Total	72.5	0								
04166	PCB- Total	0.0005	1								
34694	Phenol – Single Compound	Monitor	1								
00665	Phosphorus – Total	19.2959	0	4.8	4.5	4.1	4.1	3.8	3.9	3.9	4.4
01147	Selenium – Total	0.028	4								
01077	Silver - Total	0.1374	4								
00530	Solids – Total Suspended	723.898	0	327	240	226	235	226	227	228	249
34475	Tetrachloroethylene	Monitor	1								
34010	Toluene	Monitor	1								
39180	Trichloroethylene	Monitor	1								
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., '3/2012') reflect monthly averages as per EPA annual report guidance.

Table 7-6: Priority Pollutant Effluent Goals Data Summary, 2012

York City Wastewater Treatment Plant

Parameter Code	Effluent Pollutant	Goal	Frequency By Year	2/1/2012	3/28/2012	5/31/2012	8/22/2012	9/26/2012	11/12/2012	12/12/2012
34506	1-1-1-Trichloroethane	No Goal	0					<0.001	<0.001	
01002	Arsenic – Total	0.034	4	<0.0050		<0.0050	<0.0050			<0.0050
34030	Benzene	No Goal	0					<0.001	<0.001	
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	<0.0010		<0.0010	<0.0010			<0.0010
32106	Chloroform	No Goal	0					<0.001	<0.001	
01034	Chromium – Total	0.034	4	<0.0010		<0.0010	<0.0010			0.0016
01042	Copper – Total	0.0497	4	<0.0050		<0.0050	<0.0050			<0.0050
00720	Cyanide – Total	0.0177	4	<0.0050		<0.0050	<0.0050		<0.0050	<0.0050
34371	Ethylbenzene	No Goal	0					<0.001	<0.001	
01051	Lead – Total	0.021	4	<0.0030		<0.0030	0.0034			0.0051
71900	Mercury – Total	0.0002	4	**<0.00050**		**<0.00050**	<0.00020			<0.00020
34423	Methylene Chloride	No Goal	0					<0.001	<0.001	
01062	Molybdenum – Total	Monitor	4	0.021		0.029	0.022			0.081
01067	Nickel – Total	0.2764	4	<0.0025		0.0029	<0.0025			0.0059
00610	Nitrogen – Ammonia	1.7	0							
00630	Nitrogen – Total	14.5	0							
04166	PCB- Total	0.0012	0		<0.00048					
34694	Phenol – Single Compound	No Goal	0					<0.0075	<0.0075	
00665	Phosphorus – Total	1.9	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							
34475	Tetrachloroethylene	No Goal	0					<0.001	<0.001	
34010	Toluene	No Goal	0					<0.001	<0.001	
39180	Trichloroethylene	No Goal	0					<0.001	<0.001	
01092	Zinc – Total	0.6353	4	0.037		0.034	0.027			0.048

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 7-7: Priority Pollutant Biosolids Goal Data Summary, 2012

York City Wastewater Treatment Plant

Parameter Code	Effluent Pollutant	Goal	Frequency By Year	1/5/12	2/2/12	3/1/12	5/7/12	5/31/12	7/2/12	8/22/12	9/3/12	11/8/12	12/11/12
34506	1-1-1-Trichloroethane	Monitor	1					<0.485					
01002	Arsenic – Total	41	4	2.87	<11.9	2.78	4.03	<11.0	<2.87	<11.4	3.29	3.43	<11.6
34030	Benzene	Monitor	1					<0.485					
39100	Bis (2-ethylhexyl) Phthalate	Monitor	1					14.400					15.300
00310	BOD- 5-day	No Goal	0										
01027	Cadmium – Total	39	4	2.07	<3.0	1.92	3.16	<2.85	2.77	2.8	2.69	2.28	<2.9
32106	Chloroform	Monitor	1					<0.485					
01034	Chromium – Total	Monitor	4	21.8	29.1	16.7	26.8	28.2	23.3	26.6	22.6	22.2	25.4
01042	Copper – Total	1500	4	378.6	426	326.1	517.8	419	464.6	492	516.8	489.4	443
00720	Cyanide – Total	Monitor	4	<1	<1.6	<1	<1	<1.6	<1	<1.5	<1	<1	<1.5
34371	Ethylbenzene	Monitor	1					<0.485					
01051	Lead – Total	300	4	51.3	53.4	40.0	64.2	59.3	82.2	104	91.5	83.8	75.2
71900	Mercury – Total	17	4	0.87	<1.1	1.33	0.90	1.2	1.74	0.91	0.83	1.02	2.3
34423	Methylene Chloride	Monitor	1					<0.485					
01062	Molybdenum – Total	75	4	17.71	20.3	14.84	24.42	23.6	23.97	24.0	24.01	21.23	20.2
01067	Nickel – Total	420	4	17.8	25.4	15.7	26.0	24.2	24.8	23.5	22.0	21.4	25.8
00610	Nitrogen – Ammonia	No Goal	0										
00630	Nitrogen – Total	No Goal	0										
04166	PCB- Total	4	1	<0.15		<0.14	<0.2	<0.21	<0.18		<0.18	<0.15	
34694	Phenol – Single Compound	Monitor	1					<1.720					<16.100
00665	Phosphorus – Total	No Goal	0										
01147	Selenium – Total	100	4	7.92	<29.9	6.01	6.41	<27.4	7.35	<28.4	7.55	6.18	<29.0
01077	Silver - Total	Monitor	4		12.6			12.3		13.1			9.3
00530	Solids – Total Suspended	No Goal	0										
34475	Tetrachloroethylene	Monitor	1					<0.485					
34010	Toluene	Monitor	1					<0.485					
39180	Trichloroethylene	Monitor	1					<0.485					
01092	Zinc – Total	2800	4	550.0	606	449.4	711.4	617	684.0	779	793.3	710.1	675

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.

7.8.2. 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 2012 to somewhere other than the City of York wastewater treatment plant are: AMZ Manufacturing, American Ash Recycling, CP Industries, 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 EQ Pennsylvania.

American Ash Recycling recovers metals from municipal waste incinerator ash. A new wash system was installed in 2012 that uses a high volume of water in a closed loop, no-discharge system to wash particulates from the recovered metals. The new system was in the testing and refining stage in 2012: Wastewater from the new materials wash system was hauled off-site once by Kline's Services.

CP Industries performs two distinct operations: liquid soap and detergent manufacturing (40 CFR 417) and road salt preparation and packaging. The facility submitted a required annual certification stating that all wastewater (6,050 gallons) was hauled off-site in 2012 by ArrowStream Freight Services.

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. Propylene glycol wastewaters and dilute ethylene glycol solution were hauled off-site by Environmental Recovery Corp.

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 hauled by Clean Venture, Inc./CycleChem, Inc.

RecOil, Inc. is a zero-discharge centralized waste treatment facility for oils treatment and recovery (40 CFR 437 subpart B). Oily waters were received on-site and were hauled off-site Spirit Services.

Increasingly, brine wastes from oil and gas drilling are becoming more important in Pennsylvania. EQ Pennsylvania receives hauled wastes, which it then de-lists and de-characterizes. EQ Pennsylvania did not receive any brine wastes at its York facility in 2012. Therefore, no brine wastes were discharged to the sewer system, and no brine wastes were re-manifested out to another facility for disposal.

7.8.3. Pretreatment Program Changes

Staffing in 2012 remained unchanged from 2011. Staffing in 2012 included one Pretreatment Permit and Compliance Manager and one Pretreatment Compliance Officer. The General Manager of Wastewater Facilities supervises pretreatment staff.

The City of York continues to use Linko CTS to manage its industrial information. 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.

The City of York Wastewater Treatment Plant received its renewed National Pollution Discharge Elimination System (NPDES) permit, which became effective February 1, 2008. In accordance with the

permit, the local limits sampling plan was submitted on April 18, 2008, and was approved by USEPA on May 1, 2008. The local limits reevaluation document was submitted to USEPA January 29, 2009. Multiple communications between the City of York and the USEPA occurred, and on April 21, 2011 USEPA accepted the proposed local limits, with the exception of BOD, and on October 18, 2011 accepted retaining the existing BOD limit. A public meeting was held June 22, 2011, and passage of the amended local limits by the Council of the City of York occurred on October 4, 2011 within the six-month timeframe allowed under the NPDES permit. All municipalities adopted the new local limits in late 2011 through early 2012: the last ordinance was received in July 2012. The City of York forwarded proof of ordinance amendments to the USEPA on July 23, 2012. USEPA approved the local limits in correspondence dated November 15, 2012. All industrial wastewater discharge permits were amended by page replacement to reflect the new local limits. For categorical industrial users whose permit limits were derived using the combined wastestream formula, parameter values were compared to ensure the more stringent limit was applied in the permits.

The next cycle of local limit evaluations will begin in 2013. 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 2013. The local limits sampling plan is required to be submitted to EPA within three months of permit issuance.

7.8.4. Miscellaneous Developments

Activities

In 2012 MIPP engaged in the following activities:

- Attended pretreatment program and MS4 training.
- Continued to search for other significant industrial users.
- Assisted with MS4 field mapping and outfall water sampling.

In 2013 MIPP intends to:

- Attend an 8-hour HAZWOPER refresher course.
- Update Linko software and computer systems.
- Attend pretreatment program and MS4 training.
- Develop performance measurements for different areas of the pretreatment program.
- Enroll in Sacramento State Office of Water Programs training stormwater best management practices courses (of which there are three).
- Continue to search for other significant industrial users.
- Assist with MS4 field mapping and outfall water sampling.
- Assist with writing the MS4 permit-required Chesapeake Bay Pollutant Reduction Plan.

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 continued to participate in duties associated with the City of York's Municipal Separate Storm Sewer System (MS4) NPDES permit. The MIPP Pretreatment Permit and Compliance Manger sits on the MS4 task force. MIPP staff are 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 (which eventually will be spatially referenced to the City of York geographic information system); assisting in illicit discharge investigation as needed; addressing illicit discharge complaints submitted by citizens to the MS4 "hotline' number; assisting the Highway Superintendent in dry-weather storm system sampling; and, coordinating with other departments to ensure all illicit discharge events are reported.

In 2012 there were thirty-three (33) illicit discharge investigations: of those, five (5) were not illicit discharges as defined by the City of York MS4 permit, and five (5) 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. Pollution events and watercourses don't heed municipal boundaries: tracing discharge sources may lead to source locations outside the City of York. In 2012 MIPP staff attended MS4 related training sessions.

In 2012 staff conducted dry-weather stormwater sampling twice for two sub-watersheds and assisted with the stormwater outfall mapping and field inventory, which covered approximately 1.89 miles and 33 outfalls.

Industrial Property Records

In 2010 MIPP instituted a permanent property address file for all properties researched in the sanitary sewer system. In 2011 MIPP historic files from 1997 through 2003 were culled for information, which was added to the permanent address file. In 2012, some files from 2003 through present were culled for information to add to the permanent address file: this process will continue in 2013. 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. These files will be useful as more properties are adaptively reused and the surrounding municipalities expand their sewer collection systems. The address file is permanently housed in the MIPP office as an "active" information resource: historic information will be retrieved from MIPP archived files and new information will be continually added. This information will be tied to the GIS system in the future.

Appendix A
Manchester Township Chapter 94 Municipal Wasteload Management

C.S.Davidson, Inc.
Excellence in Civil Engineering

February 6, 2013

CITY OF YORK - CHAPTER 94
WASTELOAD MANAGEMENT REPORT - 2012

MANCHESTER TOWNSHIP

A. System Monitoring, Maintenance, and Repairs

The sanitary sewer system maintenance program completed in 2012 is described on the attached Exhibit No. MT-1.

B. Collection System Condition

1. Description of System: The system tributary to York City is divided into four service areas as tabulated on Exhibit No. MT-2. 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 (31,238 GPD) located in the City to the Wastewater Treatment Facility.

2. Conveyance Capacity: In 2005, Township crews performed emergency pumping operations at Skyview Drive and North George Street to prevent surcharges. No relief pumping was performed in 2006 through 2010. Southcentral PA was inundated with 10" to 13" of rain due to Tropical Storm Lee in September 2011. Township crews began emergency pumping on September 6, 2011 and terminated relief pumping on September 10, 2011. York County recorded 5" to 8" of rain due to Tropical Storm Sandy in October 2012. Township crews began emergency pumping on October 29, 2012 and terminated relief pumping on October 31, 2012 (see Exhibit No. MT-9).

3. Major Rehabilitation – No major repairs were performed in 2012. The Township plans to correct the following in 2013:

a. Brookfield Drive sewer main has a sag and multiple significant deformations in the flow line – MH 229 to MH 228, for approximately 60 L.F. of 8" PVC at 2.81% grade. This project has an estimated construction cost of $24,130.

C. Pumping Station Conditions

The Farmbrook Industrial Park Pump Station (No. 4) was built in 1981 (BWQM 6780405) and has a design capacity of 200 GPM. The station contains no overflows or by-passes 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 321 GPM by Township personnel. 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 2012, average daily flows through this station were as follows:

321 GPM Rated in 2011	FARMBROOK PUMP STATION (NO. 4)			
	Hours of Operation/Day	Gallons Pumped/Day	Actual Pump Capacity (GPD)	Peaking Factor
Minimum	1.83	35,246		
Average	3.80	73,188		
Maximum	14.77	284,470	462,240	3.89

The projected 2-year flows are estimated as follows:

	2012	2013	2014	Design Capacity (GPD)
Avg. Daily Flow (GPD)	73,188	87,188	110,330	
Max. Daily Flow (GPD)	284,470	338,886	428,835	532,800
% Loading (of Design)	53.4%	63.6%	80.5%	
% Loading (of Capacity)	61.5%	73.3%	92.8%	

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

The Blackbridge Road Pump Station (No. 6) 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. In December 2009, the pump station capacity was field verified at 278 GPM, versus

its design capacity of 200 GPM. Based on elapsed time meter records for 2012 average daily flows through this station were as follows:

278 GPM Rated in 2009	BLACKBRIDGE ROAD PUMP STATION (NO. 6)			
	Hours of Operation/Day	Gallons Pumped/Day	Actual Pump Capacity (GPD)	Peaking Factor
Minimum	0.97	16,180		
Average	2.30	38,364		
Maximum	3.66	61,049	400,320	1.59

The projected 2-year flows are estimated as follows:

	2012	2013	2014	Design Capacity (GPD)
Avg. Daily Flow (GPD)	38,364	40,064	40,764	
Max. Daily Flow (GPD)	61,049	63,754	64,868	288,000
% Loading (of Design)	21.2%	22.1%	22.5%	
% Loading (of Capacity)	15.3%	15.9%	16.2%	

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

The Aslan Heights Pump Station (No. 9) was placed into operation in July 1997. The design capacity of the facility is 155 GPM. In 2008, the pump station capacity was field verified at 230 GPM. Based on elapsed time meter records for 2012, average daily flows through this station were as follows:

230 GPM Rated in 2013	ASLAN HEIGHTS PUMP STATION (NO. 9)			
	Hours of Operation/Day	Gallons Pumped/Day	Actual Pump Capacity (GPD)	Peaking Factor
Minimum	1.80	24,840		
Average	3.22	44,436		
Maximum	7.72	106,536	331,200	2.40

The projected 2-year flows are estimated as follows:

	2012	2013	2014	Design Capacity (GPD)
Avg. Daily Flow (GPD)	44,436	45,136	45,836	
Max. Daily Flow (GPD)	106,536	108,214	109,893	223,200
% Loading (of Design)	47.7%	48.5%	49.2%	
% Loading (of Capacity)	32.2%	32.7%	33.2%	

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

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 2012, 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	3.67	20,699		
Average	5.87	33,107		
Maximum	16.88	95,203	135,360	2.88

The projected 2-year flows are estimated as follows:

	2012	2013	2014	Design Capacity (GPD)
Avg. Daily Flow (GPD)	33,107	33,807	34,507	
Max. Daily Flow (GPD)	95,203	97,216	99,229	115,200
% Loading (of Design)	82.6%	84.4%	86.1%	
% Loading (of Capacity)	70.3%	71.8%	73.3%	

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

D. Sanitary Sewer Extensions

1. Extensions: During 2011, the construction of a sewer extension serving the Poppy Lane Venture, LLC (PA DEP Code No. 67939- 094II) will be completed. As-built plans were provided in 2012.

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 the attached maps and Exhibit No. MT-5.

E. 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:

2008	2009	2010	2011	2012
14	10	15	20	23

2. A list of connection permits issued during 2012 is shown on Exhibit No. MT-3.

3. The estimated flows for the current year and the projected next five years are shown on the attached Exhibit Nos. MT-4 and MT-5.

4. A list of sanitary sewer capacity transfers for last year is shown on Exhibit No. MT-6.

F. Nutrient Trading Program 2003 thru 2012

1. The location of properties with on-site subsurface disposal systems repaired in 2012 is shown on Exhibit No. MT-7. No systems were eliminated last year.

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

2003	4 EDUs x 10 yrs. x 25 lbs.	1000
2004	0 EDUs	0
2005	0 EDUs	0
2006	0 EDUs	0
2007	9 EDUs x 6 yrs. x 25 lbs. =	1,350
2008	2 EDUs x 5 yrs. x 25 lbs. =	250
2009	1 EDU x 4 yrs. x 25 lbs. =	100
2010	0 EDU x 3 yr. x 25 lbs. =	0
2011	2 EDU x 2 yr. x 25 lbs. =	100
2011	0 EDU x 1 yr. x 25 lbs. =	0

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

G. Capacity Available for Sale

1. On October 12, 2010, Wagman Construction, Inc. advised Manchester Township that 11,510 gallons in wastewater treatment capacity are available for sale (see Exhibit No. MT-8).

2. All capacity transfers require Manchester Township Board of Supervisors' approval.

H. Connections to City of York WWTP

1. According to Township records, there are 2001 connections to the system (see Exhibit No. MT-11).

K:\084160038\documents\correspondence\Chapter 94 Report (narrative).doc

EXHIBIT NO. MT-1
February 6, 2013

MANCHESTER TOWNSHIP SANITARY SEWER SYSTEM MAINTENANCE PROGRAM

2012

1. As of December 31, 2012, the Manchester Township Sanitary Sewer System consisted of 133.4 miles of sewer line and nine (9) pump stations. 45.52 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 twelve (12) full-time employees of which, three (3) are assigned to perform sanitary sewer related duties. They are responsible for the daily maintenance of the 133.4miles 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 2012 they responded to 937 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 2012, the sewer maintenance activities included the following:

   a. Lines tributary to the York City system – 44,191 feet of cleaning, and 13,690.58 feet of televising. Root cutting and RootX application to 4,835.75 feet of sewer line. There were no new sanitary sewer lines constructed in this area in 2012

   b. Lines tributary to the Dover Township system – 42,830 feet of cleaning and 18,767.08 feet of televising. Root cutting in 1,260 feet of sewer line. There were 342 feet of sewer lines constructed in this area during 2012.

c. Lines tributary to the Springettsbury Township system – 21,482 feet of cleaning, and 11,011.93 feet of televising. There were 1,012 feet of new sewer lines constructed in this area in 2012.

d. The sewer maintenance personnel raised or repaired fifty-seven (57) manhole frames, eleven (11) of which were tributary to the York City system, sixteen (16) tributary to the Springettsbury system, and thirty (30) tributary to the Dover system. Personnel also conducted inspections of 121 manholes tributary to the York City system, 116 manholes tributary to the Springettsbury system, and 143 manholes tributary to the Dover system.

e. 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, heavy rain and snow melt occurred. In 2012 relief pumping was necessary when the area received in excessive rain from hurricane Sandy. DEP was notified when the pumping operation began and a letter was sent to DEP after the operation ceased.

f. The sewer maintenance personnel monitor and clean the pump station wet wells as needed to remove any accumulation of grease that is present. In 2011, there was an article published in the Township's newsletter to educate residents on the proper disposal of household grease and distributed to every residential property located in the Township. The newsletter is distributed quarterly to approximately 7,097 households.

g. During 2012, 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 2013.

h. As an additional tool to identify sources of I/I, sewer department personnel performed smoke testing of various sanitary sewer lines. There were 12,053 of sanitary sewer line tributary to the York City Treatment Plant, 17,437 of sanitary sewer line tributary to Springettsbury Township treatment plant and 12,384 of sanitary sewer lines tributary to the Dover Township Treatment Plant. There were 34 cleanout caps identified as either being broken or missing during this testing. Letters were sent to the affected property owners to have these items repaired with a follow up inspection of the repair being performed by Township personnel.

i. On September 26, 2003, all required information and forms were submitted to the Department of Environmental Protection to have nine (9) employees of Manchester Township, that were eligible, to be grand parented into the required certification program as a satellite sewage treatment operator. Since that time two (2) employees terminated their employment with Manchester Township and

one (1) employee elected to not renew his certification due to impending retirement. In May of 2009 two (2) additional employees received their Wastewater System certifications bringing the total to eight (8) employees certified to operate the wastewater system within Manchester Township. In November 2012 two (2) employees that were grand parented into the program, satisfactorily completed training and testing to receive their permanent certification. Training will continue for all employees as necessary to comply with the regulations to maintain the certifications.

j. 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.

6. During the 2012 calendar year Manchester Township and/or the Manchester Township Municipal Authority contracted private contractors to perform sewer related services as follows:

a. E.K. Services Inc.

(1) Replace 259 L.F. of 8" sanitary sewer line tributary to the Springettsbury Township Treatment facility.
(2) Replace 112 L.F. of 8" sanitary sewer line tributary to the Dover Township Treatment facility.

b. Abel Recon

(1) Apply spray roc liner material in 2 manholes tributary to the Dover Township Treatment Plant.
(2) Grout and apply spray roc liner in 4 manholes tributary to the Dover Township Treatment Plant.
(3) Grout pump station 9 wet well which is tributary to the York City Treatment Plant

b. Shiloh Excavating

(1) Repair sanitary sewer force main at pump station # 9.

7. In 2013, 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 2013are as following:

a. Clean, televise, and repair as necessary, all sanitary sewer lines affected by the 2013 street and road construction schedule. Manhole adjustments and repairs to be completed as required too reduce infiltration.

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. Continue conducting smoke testing of sewer lines as a means to identify possible sources of I/I and illegal connections.

f. Conduct inspections of properties identified to have sump pumps 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. Continue to review and schedule appropriate inspections based on the Inflow/Infiltration modeling prepared for the York City Codorus Interceptor study by Buchart-Horn. If necessary schedule and perform repairs to correct significant sources of Inflow/Infiltration.

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

End of Year Sewer Report 2012

	York	Springetts	Dover	Year End Totals
Lines Cleaned	44191	21482	42830	108503
New Pipe TV"	0	1012	342	1354
Old Pipe TV "I&I"	18066.33	11011.93	21024.93	50103.19
Smoke Test	12053	17437	12384	41874
Lines Root Cut	4835.75	0	1260	6095.75
Manhole Inspections	121	116	143	380
Manholes Repaired	1	16	30	57
Dishpans Installed	8	5	10	23
Laterals TV"	7	4	12	23
Grease Trap Inspection	42			
Storm Inlet Cleaning	212			

Comments:

APRIL — Abel recon was contracted to do manhole rehabilitations in the dover district using their grout and sprayrock application.

MAY — Abel recon was contracted to line several more manholes in the dover district using sprayrock.

AUGUST — E.K. Services was contracted to replace 112 feet of 8 inch pvc sewer main which was bad from mh 106-107 on board rd. in the springettsbury district.
E.K. Services was contracted to replace 112 feet of 8 inch pvc sewer main which was bad on Oberlin drive from mh 214-215.

Aaron enterprises along with the manchester township road crew eliminated mh for the force main cleanout and replaced the leaking force main elbow, this work was done at pump station #6.

NOVEMBER — Hydra- neumatic was contracted to repair bad motor wires on pump #1 at pump station #4, this was due to a power surge from storm.

Manchester Township

Department of Environmental Protection

Wastewater Systems Operators Certificate Information

Grandparented Facility Id # 567443

Name	Client ID #	Certificate #	Exp. Date
Dane M Beakler	235853	S13583	9/30/2013
Jeffrey A Beshore	235871	S13589	9/30/2013
Kenneth E Goodyear	235868	S13587	9/30/2013
Robert M Hartman	235828	S13579	9/30/2013
Theodore R Heilman	235863	S13586	9/30/2013
Paul A Hoover	235860	S13585	9/30/2013
Greg A Frye	267277	S15996	3/31/2015
Scott R Nace	267284	S15997	3/31/2015

Seven employees attended a Permit Required Confined Space Entry Training held at the Dover Township Advanced Wastewater Treatment Facility on June 20, 2012 and received 2 contact hours.

EXHIBIT NO. MT-2
February 6, 2013

AS OF DECEMBER 31, 2012
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.

EXHIBIT NO. MT-3
February 6, 2013

MANCHESTER TOWNSHIP
YORK CITY WASTEWATER TREATMENT PLANT
2012 CONNECTIONS

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

Chap 94#	Permit #		Name	Address	Subdivision	Dist	Plant	Units	Gallons	Month
3	2012 -	16	Fox Clearing, LLC	3421 E. Sorrel St.	AD	D	York	1	350	July
3	2012 -	17	Fox Clearing, LLC	3330 E. Sorrel St.	AD	D	York	1	350	Aug
3	2012 -	19	Fox Clearing, LLC	3323 E. Sorrel St.	AD	D	York	1	350	Aug
3	2012 -	20	Fox Clearing, LLC	3333 E. Sorrel St.	AD	D	York	1	350	Sept
3	2012 -	22	Fox Clearing, LLC	3440 E. Sorrel St.	AD	D	York	1	350	Sept
3	2012 -	23	Fox Clearing, LLC	3432 E. Sorrel St.	AD	D	York	1	350	Sept
3	2012 -	25	Fox Clearing, LLC	3102 Biscayne Ln.	AD	D	York	1	350	Oct
				ADDINGTON RESERVE	**TOTAL**			**7**	**2,450**	

SPRING MEADOWS Section IV & VII
PA DEP P3-67939 - 122 II

Chap 94#	Permit #		Name	Address	Subdivision	Dist	Plant	Units	Gallons	Month
18	2012 -	3	CSC Contractors, Inc.	2862 Halstead Ln.	SM	D	York	1	350	Apr
18	2012 -	10	James 7 Sandra Frase	671 Foxtail Dr.	SM	D	York	1	350	July
18	2012 -	29	High Grove Properties	629 Foxtail Dr.	SM	D	York	1	350	Nov
				SPRING MEADOWS Section IV & VII	**TOTAL**			**3**	**1,050**	

WHITE ROCK - FR LEO LANE PROPERTY HOLDING
PA DEP A3-67939 - 423-3E approved 8/11/08

Chap 94#	Permit #		Name	Address	Subdivision	Dist	Plant	Units	Gallons	Month
33	2012 -	24	FR Leo Lane Property Holding	20 Leo Ln.	MISC	D	York	1	2508	Nov
				WHITE ROCK	**TOTAL**			**1**	**2,508**	

MANCHESTER TOWNSHIP
YORK CITY WASTEWATER TREATMENT PLANT
2012 CONNECTIONS

BRANDYWINE WOODS - Phase 2
PA DEP P3-67939 - 412 E approved 6/13/05

Chap 94#	Permit #		Name	Address	Subdivision	Dist	Plant	Units	Gallons	Month
84	2012 -	2	Ridgewall, LLC	634 Crosslyn Dr.	BW	D	York	1	350	Apr
84	2012 -	6	Ridgewall, LLC	653 Crosslyn Dr	BW	D	York	1	350	May
84	2012 -	8	Keystone Custom Homes	668 Crosslyn Dr.	BW	D	York	1	350	May
84	2012 -	13	Ridgewall, LLC	685 Crosslyn Dr.	BW	D	York	1	350	July
84	2012 -	14	Ridgewall, LLC	679 Crosslyn Dr.	BW	D	York	1	350	July
84	2012 -	15	Ridgewall, LLC	2650 Hummel Dr.	BW	D	York	1	350	July
84	2012 -	21	Ridgewall, LLC	2675 Hummel Dr.	BW	D	York	1	350	Sept
84	2012 -	27	Ridgewall, LLC	673 Crosslyn Dr.	BW	D	York	1	350	Oct
84	2012 -	28	Ridgewall, LLC	2620 Hummel Dr.	BW	D	York	1	350	Oct
84	2012 -	34	Ridgewall, LLC	2634 Hummel Dr	BW	D	York	1	350	Dec
84	2012 -	35	E. Treffinger Gen. Contract.	657 Parkwood Dr	BW	D	York	1	350	Dec

BRANDYWINE WOODS - Phase 2	**TOTAL**		**11**	**3,850**

MISCELLANEOUS

Chap 94#	Permit #		Name	Address	Subdivision	Dist	Plant	Units	Gallons	Month
	2012 -	12	Dennis & Renae Scott	1980 Karyl Ln.	MISC	D	York	1	350	July

MISCELLANEOUS	**TOTAL**		**1**	**350**

York City Wastewater Treatment Plant	**TOTAL**	**23**	**10,208**

C.S. DAVIDSON, INC.

EXHIBIT NO. MT-4
February 6, 2013

TABULATION OF AVAILABLE
SEWER RESERVE CAPACITY

COLLECTION AND TRANSPORTATION SYSTEM
From: Manchester Township

WASTEWATER TREATMENT FACILITY
To: City of York

	2012	2013	2014	2015	2016	2017	Future Years
Existing Flow From Current Users	932,918	932,918	977,356	1,028,328	1,158,858	1,231,368	1,289,168
Projected Flows From Current Users	0	7,656	0	0	0	0	0
Projected Flow Increase From New Customers	0	36,782	50,972	130,530	72,510	57,800	1,221,174
Total Estimated Wastewater Flows	932,918	977,356	1,028,328	1,158,858	1,231,368	1,289,168	2,510,342
Percent Usage	38.31%	40.14%	42.23%	47.59%	50.57%	52.95%	103.10%
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	1501982	1457544	1406572	1276042	1203532	1145732	-75442

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 2011 (23 new EDUs 10,208 gpd) connections not reflected in (1) above (see Exhibit No. MT-3).

(3) See attached list of projected connections (Exhibit No. MT-5).

C.S. DAVIDSON, INC.

EXHIBIT NO. MT-5
February 6, 2013

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) 2013	2014	2015	2016	2017	2013 - '17 Subtotal	2018 2022	2023 2027	2028 2032	2033 Ultimate	Points of Connection Total Gallons	Flow Meter	York City MH No.	Man Twp MH No.
1	Tom Beshore Evenbreth Heights (2 EDU's @ 350 GPD)		16-16A	700	0	0	0	0	0	0	0	0	0	700	700	MN02	4	
*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	Addington Reserve Lewisberry Road (44 Units @ 350 GPD)	(4)	LH-88A	8,750	3,500	1,400	1,400	1,400	1,050	8,750	0	0	0	0	8,750	MN01	1	
4	RESERVED FOR FUTURE USE																	
5	Rutter's Property Masonic Drive & Parklyn Lane PA DEP Permit No. 6782406 (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	
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	Wagman Properties Farmbrook Ind. Park PA DEP Permit No. 6780405 (5.42 Ac. @ 2,000 GPD/Ac.)	(4)	27-7	10,845	350	0	0	0	0	350	0	10,495	0	0	10,845	MN01	1	
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	
9	Northgate Associates 1500 N. George Street (1 Comm. @ 3,900 GPD)		8-16	3,900	0	0	0	0	0	0	3,900	0	0	0	3,900	MN02	4	
10	Potteiger Property PennDot District 8-4 (1 Comm. @4,000 GPD)	(4)		4,000	2,000	1,000	1,000	0	0	4,000	0	0	0	0	4,000	MN01	1	
11	Wilner Realty Reuse PennDOT Parcel (1 Comm. @5,000 GPD)			5,000	0	0	2,000	2,000	1,000	5,000	0	0	0	0	5,000	MN01	1	
12	Wilner Realty Hotel Site (1 Comm. @ 10,000 GPD)			10,000	0	0	0	5,000	5,000	10,000	0	0	0	0	10,000	MN01	1	

	Name & Description		Map & Parcel	Gallons Currently Reserved	All Projected Connections in Gallons per Day (GPD) 2013	2014	2015	2016	2017	2013 - '17 Subtotal	2018 2022	2023 2027	2028 2032	2033 Ultimate	Points of Connection Total Gallons	Flow Meter	York City MH No.	Man Twp MH No.
13	RESERVED FOR FUTURE USE																	
14	RESERVED FOR FUTURE USE																	
15	Lutheran Social Services Paul Sprenkle Tract (7.9 Apts. @ 250 GPD)		KH-65A	1,992	1,992	0	0	0	0	1,992	0	0	0	0	1,992	MN01	1	
16	Trout Property/Erin's Glen (10 Lots @ 350 GPD)		KH-83&83A	3,500	1,050	1,050	700	700	0	3,500	0	0	0	0	3,500	MN02	1P2-13	
17	RESERVED FOR FUTURE USE																	
18	Spring Meadows (PRD) Church Road Area (140.7 EDU's @ 350 GPD)		KH-112	49,250	700	700	700	0	0	2,100	20,000	20,000	7,150	0	49,250	MN01	1	
19	RESERVED FOR FUTURE USE																	
20	RESERVED FOR FUTURE USE																	
*21	Henry Mohr - The Manor Group 1800 Block N. George Street (8.76 Ac @ 1000 GPD/Acre)		KH-190	8,760	350	350	5,000	3,060	0	8,760	0	0	0	0	8,760	MN01	1	15
*22	Rutters Commercial Area Susquehanna Tr. N/O Lightner (9.4 Ac @ 1000 GPD/Acre)		KH-171A	9,350	1,050	0	0	0	0	1,050	0	0	8,300	0	9,350	MN01	1	24
23	Susquehanna Trail, LP Farmbrook Industrial Park 3380 Susquehanna Trail (1 Industrial @ 453 GPD)	(4)	27-1	453	0	0	0	0	0	0	453	0	0	0	453	MN01	1	
24	MTMA - Act 537 500 Block Church Road - Project #2 (3 EDU's @ 350 GPD)		5-44,44B,44C	1,050	350	350	350	0	0	1,050	0	0	0	0	1,050	MN01	1	
25	Masonic Drive Hotel, Restaurant & Bank (15 EDUs @ 350 GPD)		KH-171	5,250	700	3,500	0	0	0	4,200	1,050	0	0	0	5,250	MN01	1	
*26	Sinking Springs Farm Office Area (4 Acres @ 1000 GPD/Acre)		KH-175	4,000	0	0	0	0	0	0	2,000	2,000	0	0	4,000		1	

C.S. DAVIDSON, INC.

EXHIBIT NO. MT-5
February 6, 2013

	Name & Description		Map & Parcel	Gallons Currently Reserved	All Projected Connections in Gallons per Day (GPD) 2013	2014	2015	2016	2017	2013 - '17 Subtotal	2018 2022	2023 2027	2028 2032	2033 Ultimate	Points of Connection Total Gallons	Flow Meter	York City MH No.	Man Twp MH No.
27	Penn State Investors Bentz Tract (1 EDU @ 350 GPD)		KH-150	350	0	0	0	0	0	0	350	0	0	0	350	MN01	1	
28	York County Solid Waste Authority Incinerator PA DEP Permit No. 6787408 (1 Ind. @ 46,932 GPD)	(6)	KI-216A	46,932	1,000	350	35,000	0	0	36,350	10,582	0	0	0	46,932	MN01	1	
*29	White Oak Associates Commercial (1 EDU @ 350 GPD)		KH-189	350	0	0	0	0	0	0	350	0	0	0	350	MN01	1	25
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	
31	RESERVED FOR FUTURE USE																	
*32	Tyrone Miller (north side) (10 EDU's @ 350 GPD)		KH/52B	3,500	0	350	0	0	0	350	3,150	0	0	0	3,500	MN01	1	
*33	First Logistics Center (formerly Raintree Ind. Park) (1 IND @ 7,492 GPD)		LH-20D	7,492	4,300	2,192	1,000	0	0	7,492	0	0	0	0	7,492	MN01	1	PS4
34	RESERVED FOR FUTURE USE																	
35	Krammes (Car Wash) N. George Street (1 Comm. @ 418 GPD)		8-149	418	0	0	0	0	0	0	418	0	0	0	418	MN01	1	
36	RSD Investments 3335 Farmtrail Road PA DEP Permit No. 6780405 (1 Ind. @ 685 GPD)	(4)	27-10	685	0	0	0	0	0	0	685	0	0	0	685	MN01	1	
37	Wheatfield Estates Raintree Road (66 EDU's @ 350 GPD)	(4)		23,100	1,750	3,500	3,500	3,850	3,500	16,100	7,000	0	0	0	23,100	MN01	1	PS4
38	RESERVED FOR FUTURE USE																	
39	Thomas Emig Greenleaf Road (1 EDUs @ 350 GPD)		4-1E	350	350	0	0	0	0	350	0	0	0	0	350	MN01	1	

C.S. DAVIDSON, INC.

EXHIBIT NO. MT-5
February 6, 2013

	Name & Description	Map & Parcel	Gallons Currently Reserved	All Projected Connections in Gallons per Day (GPD) 2013	2014	2015	2016	2017	2013 - '17 Subtotal	2018 2022	2023 2027	2028 2032	2033 Ultimate	Points of Connection Total Gallons	Flow Meter	York City MH No.	Man Twp MH No.
40	Federal Express (4) 505 Farmbrook Drive PA DEP Permit No. 6780405 (1 Comm. @ 1,153 GPD)	27-5	1,153	0	0	0	0	0	0	1,153	0	0	0	1,153	MN01	1	
41	Wilner Realty 351 Loucks Road North Mall Renovation (1 Comm. @ 1,770 GPD)	16-33	2,030	350	0	0	0	0	350	1,680	0	0	0	2,030	MN02	4	
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	
*43	Stewart Associates - Bull Rd. (25 acres W. of Greenbriar Rd.) (92.8 EDU's @ 350 GPD)	KH-65D&JH-79	32,500	0	350	2,100	2,100	2,100	6,650	10,000	10,000	5,850	0	32,500	MN03	IP2-13	N/A
44	Central York School Dist. Hayshire School Site (Growth)	JH-115	1,559	0	0	0	0	0	0	0	1,559	0	0	1,559	MN03	IP2-13	
*45	Craft/Hamme (10) Church Road (6 EDU's @ 400 GPD)	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 (10) Church Rd./Roosevelt Ave. - Project #1 (2 EDU's @ 350 GPD)		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	
*48	Welbourne Reserve (5) Susquehanna Trail North (451 EDUs @ 350 GPD)	LH-107 LH-108	157,850	350	700	10,500	10,500	10,500	32,550	52,500	52,500	20,300	0	157,850		1	PS4
49	RESERVED FOR FUTURE USE																
*50	George Kain Office 2800 N. George Street (5.82 Ac @ 1000 GPD/Acre)	3-1,1A,9A	5,820	350	0	0	0	0	350	0	0	0	5,470	5,820	MN01	1	25
51	RESERVED FOR FUTURE USE																
52	RESERVED FOR FUTURE USE																

C.S. DAVIDSON, INC.

EXHIBIT NO. MT-5
February 6, 2013

	Name & Description		Map & Parcel	Gallons Currently Reserved	All Projected Connections in Gallons per Day (GPD) 2013	2014	2015	2016	2017	2013 - '17 Subtotal	2018 2022	2023 2027	2028 2032	2033 Ultimate	Points of Connection Total Gallons	Flow Meter	York City MH No.	Man Twp MH No.
53	Blaine Gingerich AnnaMay Street (1 EDU @ 350 GPD)		KH-126A	350	0	0	0	0	0	0	350	0	0	0	350	MN01	1	
54	RESERVED FOR FUTURE USE																	
55	RESERVED FOR FUTURE USE																	
*56	Tan Bach Industrial 3385 Susquehanna Trail (1 Industrial @ 60 GPD)	(4)	LH-24	60	0	0	0	0	0	0	60	0	0	0	60	MN01	1	PS4
57	Markey Industrial Park Blackbridge Road (21.89 Ac x 1,000 GPD/Ac)	(6)	KI-231P thru U	21,890	700	350	0	0	0	1,050	0	0	20,840	0	21,890	MN01	1	
*58	Lemkelde Farm (100 EDU's @ 350 GPD)	(4)	LH-88	35,000	0	350	350	350	350	1,400	15,000	15,000	3,600	0	35,000	MN01	1	PS4
59	Tyrone Miller South Side (2 EDU's @ 350 GPD)		KH-152F	700	350	350	0	0	0	700	0	0	0	0	700	MN01	1	
60	RESERVED FOR FUTURE USE																	
61	RESERVED FOR FUTURE USE																	
62	MTMA - Act 537 Church Road - Project #6 (8 EDUs @ 350 GPD)	(10)		2,800	0	0	0	0	0	0	2,800	0	0	0	2,800	MN03	1P2-13	
63	Rutter's High Density 61 Acres (305 EDUs)			106,750	0	500	2,500	2,500	2,500	8,000	35,000	35,000	28,750	0	106,750	MN01	1	
64	MTMA - Act 537 Bear 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	
*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	PS4
66	RESERVED FOR FUTURE USE																	
67	RESERVED FOR FUTURE USE																	
*68	Stewart Associates (Ind) 20.39 AC		JH-79	1,050	0	0	0	0	0	0	0	1,050	0	0	1,050	MN03	IP2-13	N/A

	Name & Description		Map & Parcel	Gallons Currently Reserved	All Projected Connections in Gallons per Day (GPD) 2013	2014	2015	2016	2017	2013 - '17 Subtotal	2018 2022	2023 2027	2028 2032	2033 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	N/A	IP2-1	
70	Cousler Park Residential (1 EDU)		KH-86,87,88	350	0	350	0	0	0	350	0	0	0	0	350	MN01	1	
71	Don Baker Farmbrook Lane (1 EDU @ 350 GPD)	(4)	LH-89	350	0	0	0	0	0	0	350	0	0	0	350	MN03	1	
*72	Sinking Springs Farm Medium Density Residential		KH-176	113,400	0	0	0	0	0	0	20,000	20,000	20,000	53,400	113,400	MN01	1	25
*73	Sinking Springs Farm High Density Residential/Office		KH-176	65,000	0	0	0	0	0	0	20,000	20,000	20,000	5,000	65,000	MN01	1	2
*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	PS4
*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	PS4
*76	Scerbo Industrial - Amelia Street (10 AC @ 1000 gpd/Ac)		KI-231F	10,000	350	8,300	0	0	0	8,650	1,350	0	0	0	10,000	MN01	1	8A
*77	Shindel (366 EDUs #350 GPD)	(5	LH-69	128,100	350	350	10,500	10,500	10,500	32,200	52,500	43,400	0	0	128,100	MN01	1	PS4
78	Stillmeadow Church of Nazerene		KH-167A	5,000	2,990	0	0	0	0	2,990	0	0	2,010	0	5,000	MN01	1	
79	First Assembly of God		KH-170A	537	0	0	0	0	0	0	0	537	0	0	537	MN01	1	
*80	Rutters Commercial (approx 80 acres)		KH-171C	80,000	350	350	5,000	5,000	5,000	15,700	25,000	25,000	14,300	0	80,000	MN01	1	25
*81	Pump Station #2 Phaseout MTMA - Project #10	(4)		10,500	0	10,500	0	0	0	10,500	0	0	0	0	10,500	MN01	1	
*82	Prospect Hill Cemetary		JH-170	95,000	1,050	0	0	0	0	1,050	20,000	20,000	20,000	33,950	95,000	N/A	B10-17	N/A
83	Manchester Twp. Municipal Authority 2900 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	
84	Brandywine Woods - Phase II (2 EDUs @ 350 gpd/unit)			700	700	0	0	0	0	700	0	0	0	0	700	MN01	1	
85	RESERVED FOR FUTURE USE																	
*86	Central School Dist.-New Middle School (77 EDUs & 350 GPD)		KH-176	26,950	0	1,050	7,000	7,000	5,000	20,050	6,900	0	0	0	26,950	MN01	1	23
87	RESERVED FOR FUTURE USE																	
88	MTMA - Act 537 - Project #3 Stillmeadow/Brandywine Lane (6 EDUs @ 350 GPD)			2,100	0	0	0	0	0	0	0	0	2,100	0	2,100	MN01	1	

C.S. DAVIDSON, INC.

EXHIBIT NO. MT-5
February 6, 2013

	Name & Description		Map & Parcel	Gallons Currently Reserved	All Projected Connections in Gallons per Day (GPD) 2013	2014	2015	2016	2017	2013 - '17 Subtotal	2018 2022	2023 2027	2028 2032	2033 Ultimate	Points of Connection Total Gallons	Flow Meter	York City MH No.	Man Twp MH No.
89	MTMA - 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	
90	Barley Beakler Susquehanna Trail (64 EDUs @ 350 GPD)	(5)	LH-56C	22,400	0	2,100	2,100	2,100	2,100	8,400	14,000	0	0	0	22,400	MN01	1	
91	J.G. Leasing Co., Inc. Stover's Glen (8 EDUs @ 350 GPD)			2,800	0	350	1,400	700	350	2,800	0	0	0	0	2,800	MN01	1	
92	J.G. Leasing Co., Inc. Butcher Court (6 EDUs @ 350 GPD)		KH&27	2,100	700	1,050	350	0	0	2,100	0	0	0	0	2,100	MN03	1P2-13	
93	J.G. Leasing Co., Inc. (1EDU @ 350 GPD)		15-406	350	0	0	0	0	0	0	350	0	0	0	350	MN03	1P2-13	
94	Richard Markey Industrial Zone Susquehanna Trail (192.8 @ 1,000 GALS/AC.)	(4)	MH-27 MH-51 MH-51A MH-28	192,800	0	350	5,000	5,000	5,000	15,350	50,000	50,000	50,000	27,450	192,800	MN01	1	
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	
96	RESERVED FOR FUTURE USE																	
97	Lucas & Kimberly Parkes Valley Road '(1EDU @ 350 GPD)			350	350	0	0	0	0	350	0	0	0	0	350	MN01	1	
98	Berkeimer 600 Block Church Road - 3 EDUs			1,050	350	700	0	0	0	1,050	0	0	0	0	1,050	MN01	1	
99	Bollinger 600 Block Church Road - 2 EDUs			700	350	350	0	0	0	700	0	0	0	0	700	MN01	1	
*N/A	Miscellaneous Development (10 EDU's/Yr. @ 350 GPD)			91,000	3,500	3,500	3,500	3,500	3,500	17,500	17,500	17,500	17,500	21,000	91,000	MN01	1	8A
	TOTALS:			**1,569,768**	**36,782**	**50,972**	**130,530**	**72,510**	**57,800**	**348,594**	**457,413**	**365,741**	**251,050**	**146,970**	**1,569,768**			

C.S. DAVIDSON, INC.

EXHIBIT NO. MT-5
February 6, 2013

Name & Description	Map & Parcel	Gallons Currently Reserved	All Projected Connections in Gallons per Day (GPD) 2013	2014	2015	2016	2017	2013 - '17 Subtotal	2018 2022	2023 2027	2028 2032	2033 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.			14,000	23,142	55,350	34,050	33,350	159,892	249,601	191,345	83,550	27,450	711,838			
(6) Project is tributary to Blackbridge Road Pump Station No. 6.			1,700	700	35,000	0	0	37,400	10,582	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	5,900			
Subtotal York City MH No. 1		1,406,089	32,232	47,472	120,380	62,810	55,700	318,594	416,843	333,132	225,200	112,320	1,406,089			
Subtotal York City MH No. 4		21,230	700	350	7,000	6,900	0	14,950	5,580	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. IP2-13		46,959	2,450	3,150	3,150	2,800	2,100	13,650	14,850	12,609	5,850	0	46,959			
Subtotal York City MH No. B10-17		95,000	1,050	0	0	0	0	1,050	20,000	20,000	20,000	33,950	95,000			
Totals:		1,569,768	36,782	50,972	130,530	72,510	57,800	348,594	457,413	365,741	251,050	146,970	1,569,768			

(5) Subject to rezoning.

MANCHESTER TOWNSHIP
2012
SANITARY SEWER TRANSFERS AND ACQUISITIONS

TRANSFERS

FROM	TO	DATE APPROVED	FOR (location)	GPD	Treatment Area
R H Waltersdorf, Inc	Shawn Whitecomb	3/13/12	2831 Primrose Lane North	300	Dover
Kohr – Hepplewhite Est	Various	4/10/12	2602 Chadbourne Drive 2740 Oberlin Drive 2636 Chadbourne Drive	300 each by letter	Dover
R H Waltersdorf, Inc	CSC Contractors	5/8/12	2615 Stevenson Drive	300	Dover
Jay Crist	Heritage Business Park	8/14/12	225 Shady Lane	1,750	Springetts

ACQUISITIONS

FROM	TO	DATE APPROVED	FOR (location)	GPD	Treatment Area
Township	Ranae & Dennis Scott	6/12/12	Brian Lane	350	York

EXHIBIT NO. MT-6
February 6, 2013

MANCHESTER TOWNSHIP
2012
ON SITE SEPTIC PERMITS

Application Number	Date Issued	Name	Location	New/Repair/ Other	Status	SEO	Sewer Area
Z120005 (MT 64)	1-9-2012	Mendez, Felix	3800 Susquehanna Trail	Repair	Final	Whitmore	York
Z120006 (MT 65)	5-15-2012	Penn State Mgmt John Davis	2975 Stillmeadow Lane	Repair	Final	Whitmore	Dover
Z120007 (MT 66)	6-20-2012	Yeaple, Rodney John Eller -applicant	3565 Raintree Road	Repair	Final	Whitmore	York
Z120008 (MT 67)	6-27-2012	Hons, Todd	1241 Greenbriar Road	Other – Perc & Probe	Working	Whitmore	Dover
Z120009 (MT 68)	7-25-2012	Hewitt, Christopher	2206 Brandywine Lane	Repair	Final	Whitmore	York
Z120010 (MT69)	9-7-2012	Jassitt, Doug	3090 Crooked Wind Lane	Repair	Final	Whitmore	Dover
Z120011 (MT70)	12-7-2012	Whitecomb, Julie	Roosevelt Avenue	New – prior to proposed subdivision	Working	Whitmore	Dover

EXHIBIT NO. MT-7
February 6, 2013

BUILDING TODAY
WAGMAN
SHAPING TOMORROW

EXHIBIT NO. MT-8
February 6, 2013

October 12, 2010

Mr. Stu Olweiler
Manchester Township
3200 Farmtrail Road
York, Pennsylvania 17406

Re: Wagman Properties – Sewer Reservations

Dear Stu:

As recently discussed, Wagman Properties has reserved approximately 19,000 gallons per day of sewer capacity across three separate parcels. Approximately 11,560 gallons is reserved in the York City facility and 7,500 in the Springettsbury facility.

To be more specific, the following is a summary of sewer capacity reserved by Wagman Properties;

Premise number	Gallons per day reserved	Plant
4239	1,350 GPD	Springettsbury
4211	6,150 GPD	Springettsbury
2574	11,510 GPD	York City

While we are keenly aware that the demand for sewer capacity may not be particularly strong at the moment, we wanted to officially inform you that we are interested in the disposition of our reserved capacity.

Please direct any and all interested parties to contact me at (717) 767-8314 or by email dlcross@wagman.com

Your time and consideration regarding this matter are greatly appreciated.

Sincerely,

David L. Cross
President & COO
Wagman Construction, Inc.

RECEIVED
OCT 14 2010
BY:

Cc: Mr. Richard Resh – C.S. Davidson (Township Engineer)
Mr. Mike Doverspike – Wagman Construction, Inc.

EXHIBIT NO. MT-9
February 6, 2013

The Township of Manchester

YORK COUNTY PENNSYLVANIA

3200 FARMTRAIL ROAD
YORK, PENNSYLVANIA 17406-5699
www.mantwp.com
Telephone: 717-764-4646 / Fax: 717-767-1400

December 3, 2012

PWD12-0011

Mr. Brian Moore
Department of Environmental Protection
Commonwealth of Pennsylvania
909 Elmerton Avenue
Harrisburg, PA 17110-8200

RE: **October 29 - 31, 2012**
Sanitary Sewer Relief Pumping
N. George Street/Skyview Drive

Dear Mr. Moore:

I am writing as a follow-up to the October 29, 2012 verbal notification made to your office at approximately 6:30 pm concerning a surcharge of sanitary sewer flows to manhole # 31, which is located at the intersection of North George Street and Skyview Drive. The surcharge was a result of Manchester Township receiving an excessive amount of rain from Tropical Storm Sandy on October 29 – 30, 2012 and the elevated flow levels at the York City Sewer Treatment Facility.

At approximately 4:30 pm on October 29, 2012 we received a high water level notification via a float located in manhole # 31 and the automatic alarm dialer located at Pump Station # 6. Robert Hartman, Public Works Crew Leader immediately responded to the scene to verify the validity of the call, after which we mobilized other Manchester Township Public Works Department employees to respond to the scene to monitor the situation. At approximately 5:30 pm on October 29, 2012, it was determined that the water level was continuing to rise and relief pumping would be necessary. The relief pumping was terminated at 1:00 am on October 31, 2012.

Please contact Sewer Crew Leader Robert Hartman or me at 717-764-4646 if you have any questions.

Sincerely,

MANCHESTER TOWNSHIP

Kenneth E. Goodyear

Kenneth E. Goodyear
Public Works Superintendent

KEG/jas

cc: Timothy R. James, Township Manager
Stewart S. Olewiler, III, Zoning/Planning Officer
Richard G. Resh, C. S. Davidson, Inc.
Robert Hartman, Sewer Crew Leader

EXHIBIT NO. MT-11
February 6, 2013
(through 4th quarter 2012)

YORK CITY CONNECTIONS
2012

Street Name	# of Units	Address range	Subdivision	New Connect
Alder Wy	12	2401 - 2445	White Oak Manor	
Angel Dr.	12	1500 - 1555	Evunbreth	
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	Debrabander	
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.	16	1907 - 2028	Lightner tract	
Bentley Ln.	23	2150 - 2198	Bentley Croft	
Bernays Dr.	67	1909 - 2296	Briar Bend	
Bert Ct.	9	310 - 390	Dominion	
Biscayne Ln.	7	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 - 2687	Brookstone	
Brandywine Ln.	57	1806 - 2512		
Breezeview Dr.	19	1360 - 1510	Evunbreth	
Brian Ln.	17	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.	2	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 - 3485	Vintage Acres	
Chapel Dr.	15	1460 - 1590	Evunbreth	
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	2610 - 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.	12	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	
Farmbrook Ln.	5	505 - 650		
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	

YORK CITY CONNECTIONS
2012

(through 4th quarter 2012)

Street Name	# of Units	Address range	Subdivision	New Connect
Forest Hill Rd.	11	110 - 175	Skyview	
Foxtail Dr.	11	621 - 686	Spring Meadows	
Frelen Rd.	6	6 - 50	Dauber	
Friesian Rd.	55	2203 - 2495	Risheleau-Chesterbrook	
Garrett Rd.	4	2655 - 2685	Clearview Heights	
Gemstone Ln.	10	3011 - 3094	Beckenham	
N. George St.	143	1500 - 2934		
Gora Rd. North	28	2505 - 2695	Dominion	
Gora Rd. South	17	1000 - 1125	Dominion	
Greenbriar Rd.			d/y	
Greenleaf Ct.	8	410 - 480	Greenleaf Manor	
Greenleaf Rd.	44	10 - 390	Woodland Hills	
Grouse Ln.	22	500 - 630	Stillmeadow Farms	
Gwen Dr.	25	200 - 395	Gwendale	
Hake St.	1	20	Mayfield	
Halstead Ln.	35	2814 - 2939	Spring Meadows	
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.	6	2626 - 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.	13	1905 - 1989	Greenbriar-Stewart	
Keystone Dr.	2	19 - 25	Clearbrook	
Knoll Ln.	19	50 - 150	Clearbrook	
Kochenour Ln.	1	10		
Kyle Rd.	21	600 - 694	Dominions II	
Leaf St.	29	602 - 699	Brandywine Crossings	
Lehrs Dr.	16	3105 - 3235	Roundtown Heights	
Leo Ln.			White Rock	
Lewisberry Rd.			d/y	
Lightner Rd.	15	58 - 166	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.	8	715 - 760	Roche Gardens	
S. Maurice St.	40	610 - 698	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.	16	2109 - 2191	Aslan Heights	
Norman Rd.	31	506 - 655	Risheleau	
North Point Dr.	74	2242 - 2375	North Point	
Northland Ave.	35	2410 - 2612	Mayfield	
Olmstead Wy.	28	505 - 705	Penn State Estates	
Pampas Dr.	6	2505 - 2535	Stillmeadow Farms	
Parkside Ave.	8	12 - 45	Aurora Heights	
Parkwood Dr.	14	624 - 682	Brandywine Crossings	
Paul St.	4	118 - 130	Mayfield	

YORK CITY CONNECTIONS
2012

(through 4th quarter 2012)

Street Name	# of Units	Address range	Subdivision	New Connect
Penn State Dr.	9	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.	18	2556 - 2598	White Oak Manor	
Sinking Springs Ln.	26	537 - 757		
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.	12	3320 - 3440	Addington Reserve	
Sprenkle Drive			Sprenkle 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 - 2496	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 - 1108	Susquehanna Village	
Warren Rd.	4	10 - 40	Aurora Heights	
Webster Ave.	9	38 - 144	Lightner tract	
White Oak Dr.	25	105 - 170		
Willis Run Rd.	1	135		
Willow Ridge Ct.	4	821 - 875	Aslan Heights	
Willow Ridge Dr.	74	700 - 1051	Aslan 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	

YORK CITY CONNECTIONS
2012

(through 4th quarter 2012)

Street Name	# of Units	Address range	Subdivision	New Connect
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	**2001**			

Appendix B
North York Borough Chapter 94 Municipal Wasteload Management

JRH
James R. Holley
& Associates, Inc.

February 27, 2013

CITY OF YORK - CHAPTER 94
WASTELOAD MANAGEMENT REPORT – 2012

NORTH YORK BOROUGH

A. Sewer Extensions

There were no new sewer extensions constructed or approved for construction, nor were there any proposed projects requiring sewer extensions during the calendar year.

B. Sewer System Monitoring, Maintenance and Repair

In 2012, Area # 4 of the Borough's sewer system was cleaned, using Manchester Township's Myers-Sherman Model 810 Vactor Truck and Township 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.

There are no plans for major maintenance or repair projects other than the routine cleaning of the next quarter of the sewer system as indicated above.

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 2012 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 2012 was 2,183 GPD with the minimum being 264 GPD and the maximum being 6,732 GPD based on elapsed time meter records (It appears from the time meter records for pump 2 that the meter is not working properly and the Borough is currently working on correcting the problem). 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 thru 2014. 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.

E. Waste Flow Data

1. 2012 Connections

No new connections were made to the Borough system in 2012.

2. Waste Flow Projections

The flow from the Borough in 2012 averaged 178,529 GPD which was 12.4% lower than that of 2011. Since only one of the four 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 and 350 GPD per EDU for each residential connection in the other three service areas.

The projected growth for the next five years is shown on Exhibit No. NYB-1.

3. Sewer Connection Totals for Previous Years

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

2008	2009	2010	2011	2012
0	0	0	5	0

James R. Holley & Assoc., Inc. February 27, 2013

NORTH YORK BOROUGH 2012 SEWAGE FLOWS

	1ST QUARTER	2ND QUARTER	3RD QUARTER	4TH QUARTER	TOTALS	AVG (GPD)
Flow Meter NY-01	8,689,786	8,561,000	8,337,000	9,777,000	35,364,786	
Metered	467,300	426,400	497,500	531,700	1,922,900	
Unmetered	6,975,150	6,975,150	7,051,800	7,051,800	28,053,900	
TOTALS:	16,132,236	15,962,550	15,886,300	17,360,500	65,341,586	178,529

Flow meter data from York City 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 27, 2013

NORTH YORK BOROUGH SEWAGE PUMPING STATION 2012

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)
12/31/11	3302.4	1.4	3084.3	0.2	1.6	5	0.3	12,672	2,534
01/05/12	3303.8	1.1	3084.5	0.1	1.2	6	0.2	9,504	1,584
01/11/12	3304.9	1.8	3084.6	0.6	2.4	7	0.3	19,008	2,715
01/18/12	3306.7	1.5	3085.2	0.5	2.0	7	0.3	15,840	2,263
01/25/12	3308.2	1.6	3085.7	0.5	2.1	7	0.3	16,632	2,376
02/01/12	3309.8	1.4	3086.2	0.4	1.8	7	0.3	14,256	2,037
02/08/12	3311.2	1.7	3086.6	0.1	1.8	7	0.3	14,256	2,037
02/15/12	3312.9	1.8	3086.7	0.2	2.0	7	0.3	15,840	2,263
02/22/12	3314.7	1.7	3086.9	0.4	2.1	7	0.3	16,632	2,376
02/29/12	3316.4	2.0	3087.3	0.0	2.0	8	0.3	15,840	1,980
03/08/12	3318.4	1.1	3087.3	0.0	1.1	6	0.2	8,712	1,452
03/14/12	3319.5	1.2	3087.3	0.0	1.2	7	0.2	9,504	1,358
03/21/12	3320.7	1.5	3087.3	0.2	1.7	7	0.2	13,464	1,923
03/28/12	3322.2	1.7	3087.5	0.4	2.1	9	0.2	16,632	1,848
04/06/12	3323.9	1.2	3087.9	0.0	1.2	6	0.2	9,504	1,584
04/12/12	3325.1	1.2	3087.9	0.3	1.5	6	0.3	11,880	1,980
04/18/12	3326.3	1.6	3088.2	0.4	2.0	7	0.3	15,840	2,263
04/25/12	3327.9	1.5	3088.6	0.2	1.7	7	0.2	13,464	1,923
05/02/12	3329.4	1.5	3088.8	0.2	1.7	7	0.2	13,464	1,923
05/09/12	3330.9	1.6	3089.0	0.3	1.9	7	0.3	15,048	2,150
05/16/12	3332.5	1.0	3089.3	0.1	1.1	6	0.2	8,712	1,452
05/22/12	3333.5	2.0	3089.4	0.5	2.5	7	0.4	19,800	2,829
05/29/12	3335.5	1.3	3089.9	0.0	1.3	6	0.2	10,296	1,716
06/04/12	3336.8	0.6	3089.9	0.1	0.7	3	0.2	5,544	1,848
06/07/12	3337.4	1.5	3090.0	0.4	1.9	7	0.3	15,048	2,150
06/14/12	3338.9	1.6	3090.4	0.4	2.0	7	0.3	15,840	2,263
06/21/12	3340.5	1.2	3090.8	0.3	1.5	7	0.2	11,880	1,697
06/28/12	3341.7	1.4	3091.1	0.3	1.7	7	0.2	13,464	1,923

James R. Holley & Assoc., Inc. February 27, 2013

NORTH YORK BOROUGH SEWAGE PUMPING STATION 2012

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)
07/05/12	3343.1	1.2	3091.4	0.3	1.5	7	0.2	11,880	1,697
07/12/12	3344.3	1.5	3091.7	0.4	1.9	7	0.3	15,048	2,150
07/19/12	3345.8	0.2	3092.1	0.0	0.2	6	0.0	1,584	264
07/25/12	3346.0	1.4	3092.1	0.2	1.6	6	0.3	12,672	2,112
07/31/12	3347.4	0.6	3092.3	0.1	0.7	8	0.1	5,544	693
08/08/12	3348.0	2.5	3092.4	0.2	2.7	7	0.4	21,384	3,055
08/15/12	3350.5	1.8	3092.6	0.2	2.0	8	0.3	15,840	1,980
08/23/12	3352.3	1.1	3092.8	0.2	1.3	6	0.2	10,296	1,716
08/29/12	3353.4	2.0	3093.0	0.3	2.3	8	0.3	18,216	2,277
09/06/12	3355.4	1.6	3093.3	0.5	2.1	7	0.3	16,632	2,376
09/13/12	3357.0	1.0	3093.8	0.1	1.1	4	0.3	8,712	2,178
09/17/12	3358.0	3.1	3093.9	0.5	3.6	9	0.4	28,512	3,168
09/26/12	3361.1	1.7	3094.4	0.3	2.0	7	0.3	15,840	2,263
10/03/12	3362.8	1.7	3094.7	0.1	1.8	7	0.3	14,256	2,037
10/10/12	3364.5	1.5	3094.8	0.1	1.6	8	0.2	12,672	1,584
10/18/12	3366.0	1.8	3094.9	0.0	1.8	7	0.3	14,256	2,037
10/25/12	3367.8	4.1	3094.9	0.1	4.2	5	0.8	33,264	6,653
10/30/12	3371.9	4.6	3095.0	0.5	5.1	6	0.8	40,392	6,732
11/05/12	3376.5	2.7	3095.5	0.5	3.2	8	0.4	25,344	3,168
11/13/12	3379.2	1.2	3096.0	0.0	1.2	8	0.2	9,504	1,188
11/21/12	3380.4	2.0	3096.0	0.1	2.1	7	0.3	16,632	2,376
11/28/12	3382.4	1.0	3096.1	0.1	1.1	8	0.1	8,712	1,089
12/06/12	3383.4	1.3	3096.2	0.2	1.5	5	0.3	11,880	2,376
12/11/12	3384.7	0.7	3096.4	0.1	0.8	5	0.2	6,336	1,267
12/16/12	3385.4	1.3	3096.5	0.3	1.6	4	0.4	12,672	3,168
12/20/12	3386.7	1.3	3096.8	0.3	1.6	6	0.3	12,672	2,112
12/26/12	3388.0	1.1	3097.1	0.1	1.2	5	0.2	9,504	1,901
12/31/12	3389.1		3097.2						

James R. Holley & Assoc., Inc. February 27, 2013

NORTH YORK BOROUGH SEWAGE PUMPING STATION 2012

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)
TOTALS	86.7		12.9		99.6	366		788,832	
AVERAGE PER DAY	0.24		0.04		0.27		0.28		2,183

Data from North York Borough Personnel

North York Borough is currently working on correcting a problem with elapsed time meter for pump 2

James R. Holley & Assoc., Inc.

February 27, 2013
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) 2013	2014	2015	2016	2017	13-'17 Subtotal	2018 2022	2023 2027	2028 2032	2033 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 (1 EDU/year)	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	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 (1 EDU/year)	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 (1 EDU/year)	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 (1 EDU/year)	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 (1 EDU/year)	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 (1 EDU/year)	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 (1 EDU/year)	varies	0	0	0	0	0	0	0	0	0	0	0	N/A	A20:A21
	TOTALS		1,050	1,050	1,050	1,050	1,050	5,250	5,250	5,250	5,250	5,250	26,250		

James R. Holley & Assoc., Inc.

February 27, 2013
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	2012	2013	2014	2015	2016	2017
Existing Flow from Current Users (2)	178,529	178,529	179,579	180,629	181,679	182,729
Projected Flows from Current Users	0	0	0	0	0	0
Projected Flow Increase from New Customers (3)	0	1,050	1,050	1,050	1,050	1,050
Total Estimated Wastewater Flows	178,529	179,579	180,629	181,679	182,729	183,779
Total Permitted Capacity/Agreement (4)	531,200	531,200	531,200	531,200	531,200	531,200
Percentage Usage	33.61%	33.81%	34.00%	34.20%	34.40%	34.60%
Total Amount of Available Capacity	352,671	351,621	350,571	349,521	348,471	347,421

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

Appendix C
Spring Garden Township Chapter 94 Municipal Wasteload Management

C.S.Davidson, Inc.
Excellence in Civil Engineering

February 5, 2013

CITY OF YORK - CHAPTER 94
WASTELOAD MANAGEMENT REPORT - 2012

SPRING GARDEN TOWNSHIP

A. System Monitoring, Maintenance and Repairs

The sewer maintenance crew has three full-time employees (see exhibit No. SGT-1) 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 No. SGT-2.

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 Co. The Township Sewer Maintenance crew performed cleaning and flushing services in designated areas. During 2012, 48,264 L.F. of sanitary sewers were flushed and 7,293 L.F. were flushed and televised (see Exhibit No. SGT-3). Next year, the Township plans to clean and flush about 35,000 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 (40,385 gpd). Wastewater in some sections of Spring Garden Township is also transported through the

York Township system and City Flow Meter No. YT-01 (160,575 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 2012. Spring Garden Township financed part of the City's Poorhouse Run interceptor/siphon improvements completed last year.

3. Major Rehabilitation: In 2012, the Township's maintenance crew repaired sewers mains and laterals (see Exhibit No. SGT-4). The Township also hired Trinity Excavating, Inc. to repair or replace piping for Project Nos. 1 through 3 (see Exhibit No. SGT-5). The Township is currently considering Project Nos. 1 through 4 for its 2013 Sanitary Sewer Maintenance Program (see Exhibit No. SGT-10).

C. 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 2012 indicate the following:

283 GPM Rated in 2011	RICHLAND AVENUE PUMP STATION			
	Hours of Operation/Day	Gallons Pumped/Day	Actual Pump Capacity (GPD)	Peaking Factor
Minimum	0.11	1,868		
Average	0.17	2,887		
Maximum	0.28	4,754	407,520	1.65

The projected 2-year flows are estimated as follows:

	2012	2013	2014	Design Capacity (GPD)
Avg. Daily Flow (GPD)	2,887	9,587	10,787	
Max. Daily Flow (GPD)	4,754	15,790	17,766	288,000
% Loading (of Design)	1.7%	5.5%	6.2%	
% Loading (of Capacity)	1.2%	3.9%	4.4%	

Pump No. 2 failed on 9/18/12 and was repaired on 10/4/12.

3. Wyndham Hills 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 December 2009 at 179 GPM. Elapsed time meter readings for 2012 indicate the following:

179 GPM Rated in 2009	WYNDHAM HILLS SOUTH PUMP STATION			
	Hours of Operation/Day	Gallons Pumped/Day	Actual Pump Capacity (GPD)	Peaking Factor
Minimum	5.13	55,096		
Average	6.61	70,991		
Maximum	8.65	92,901	257,760	1.31

The projected 2-year flows are estimated as follows:

	2012	2013	2014	Design Capacity (GPD)
Avg. Daily Flow (GPD)	70,991	78,341	83,941	
Max. Daily Flow (GPD)	92,901	102,519	109,848	252,000
% Loading (of Design)	36.9%	40.7%	43.6%	
% Loading (of Capacity)	36.0%	39.8%	42.6%	

4. 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 December 2009 at 74 GPM. Elapsed time meter readings for 2012 indicate the following:

74 GPM Rated in 2009	SOUTHWYND PUMP STATION			
	Hours of Operation/Day	Gallons Pumped/Day	Actual Pump Capacity (GPD)	Peaking Factor
Minimum	0.84	3,730		
Average	1.02	4,529		
Maximum	1.38	6,127	106,560	1.35

The projected 2-year flows are estimated as follows:

	2012	2013	2014	Design Capacity (GPD)
Avg. Daily Flow (GPD)	4,529	7,329	8,379	
Max. Daily Flow (GPD)	6,127	9,915	11,336	115,200
% Loading (of Design)	5.3%	8.6%	9.8%	
% Loading (of Capacity)	5.8%	9.3%	10.6%	

5. Pump Station Maintenance and Repairs: The standby generators are inspected and tested weekly.

D. Sanitary Sewer Extensions:

1. Extensions: In 2012, no developer sanitary sewer extensions were built.

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 the attached maps in red.

E. Waste Flow Data

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

2. The total number of sewer connections (see Exhibit No. SGT-9) completed in Spring Garden Township during each of the last five years are as follows:

2008	2009	2010	2011	2012
20	9	19	16	9

F. Nutrient Trading Program 2003 thru 2012

1. Based upon 25 lbs. per year of nitrogen, the available credits through December 31, 2011 are computed as follows:

2003	21 EDUs x 10 yrs. x 25 lbs.	5,250
2004	0 EDUs	0
2005	5 EDUs x 8 yrs. x 25 lbs. =	1,000
2006	12 EDUs x 7 yrs. x 25 lbs. =	2,100
2007	5 EDUs x 6 yrs. x 25 lbs. =	750
2008	4 EDUs x 5 yrs. x 25 lbs. =	500
2009	6 EDUs x 4 yrs. x 25 lbs. =	600
2010	8 EDUs x 3 yrs. x 25 lbs. =	600
2011	7 EDUs x 2 yrs. x 25 lbs. =	350
2012	7 EDUs x 1 yr. x 25 lbs. =	175

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

G. Sewer Accounts

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

Tributary to York City System:	4,079
Tributary to York Township System:	236

EXHIBIT NO. SGT-1
February 5, 2013

2012
CHAPTER 94 REPORTS
PERSONEL & TRAINING

BRENT BARLEY

- HIRE DATE – 12/01/03
- POSITION – CREW LEADER
- WASTE WATER LICENSE ID – 267274
- 2/09/12 WASTEWATER COLLECTION SYSTEM BASICS *PA DEP* #5656
- 2/21/12 *LTAP* WORK ZONE TRAFFIC CONTROL
- 3/08/12 SIT DOWN COUNTERBALANCE FORKLIFT TRUCK
- 3/09/12 MUNICIPAL MS4 WORKSHOP
- 4/25/12 CONFINED SPACE TRAINING & GROUNDS MAINTENANCE
- 6/07/12 *LTAP* STORMWATER MANAGEMENT CLASS
- 6/21/12 PA ONE CALL SAFETY DAY
- 8/09/12 SECURING WATER & WASTEWATER FACILITIES *PA DEP* #2952
- 9/20/12 *APWA* SEMINAR LANCASTER
- 9/21/12 COWS, CRABS, & CASH MS4 WRIGHTSVILLE
- 11/14/12 PA ONE CALL LOCATOR CLASS
- 12/20/12 PA RURAL WATER INFLOW & INFILLTRATION

CRIEG SCOTT

- HIRE DATE – 10/25/04
- POSITION – CREW PERSON
- WASTE WATER LICENSE ID – 267286
- 2/09/12 WASTEWATER COLLECTION SYSTEM BASICS *PA DEP* #5656
- 3/08/12 SIT DOWN COUNTERBALANCE FORKLIFT TRUCK
- 4/25/12 CONFINED SPACE TRAINING & GROUNDS MAINTENANCE
- 8/09/12 SECURING WATER & WASTEWATER FACILITIES *PA DEP* #2952
- 12/20/12 PA RURAL WATER INFLOW & INFILLTRATION

RUSS FULLER

- HIRE DATE – 7/02/07
- POSITION – CREW PERSON
- WASTE WATER LICENSE ID – 299095
- 2/09/12 *LTAP* SAFE DRIVER CLASS
- 3/08/12 SIT DOWN COUNTERBALANCE FORKLIFT TRUCK
- 6/21/12 PA ONE CALL SAFETY DAY
- 11/14/12 PA ONE CALL LOCATOR CLASS
- 12/20/12 PA RURAL WATER INFLOW & INFILTRATION

EXHIBIT NO. SGT-2
February 5, 2013

2012
CHAPTER 94 REPORTS
EQUIPMENT & SEWER SYSTEMS OPERATIONS

S-1 / F-250
CARRIES ALL SAFTEY EQUIPMENT FOR CONFINED SPACE ENTRY, PAINT & FLAGS FOR PA ONE CALLS, & MAINTENANCE TOOLS

S-2 / FLUSH – VAC CON TRUCK
USED FOR MAINTIANING SANITARY WET WELLS, MH'S & SEWER MAINS, ALSO STORM SEWER MAINS & INLETS

S-3 / TV VAN
USED FOR TELEVISING STORM & SANITARY MAINS & LATERALS

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

SEWER MAINTENANCE

- KEEPING STORM & SANITARY MAINS & LATERALS OPEN
- RAISE & ADJUST MH LIDS & STORM INLETS FOR PAVING
- MAINTAIN STORM & SANITERY R.O.W.'S
- PUMP STATION RECORDINGS MAINTENANCE OF WET WELLS, PUMPS, & BACK UP GENERATORS
- PA ONE CALLS

TOTALS FOR 2012

FLUSHING
YORK CITY – 48,264ft
SPRINGETTSBURY TWP – 21,398ft

TV'ING
YORK CITY – 7,293ft
SPRINGETTSBURY TWP – 5,673ft

DATE	STREET	MH START	MH END	LENGTH	MH CONDITION	COMMENTS	FLUSH
4-10-12	HILL ST	281	282	257'	GOOD	MAINTENANCE	FLUSH
4-10-12	HILL ST	280	281	200'	GOOD	MAINTENANCE	FLUSH
4-10-12	SPRINGDALE AVE	277	278	225'	GOOD	MAINTENANCE	FLUSH
4-10-12	ALBEMARLE ST	222	223	306'	GOOD	MAINTENANCE	FLUSH
4-10-12	ALBEMARLE ST	221	222	113'	GOOD	MAINTENANCE	FLUSH
4-10-12	GRANDVIEW RD	522	523	400'	GOOD	MAINTENANCE	FLUSH
4-10-12	GLENDALE RD	534	535	400'	GOOD	MAINTENANCE	FLUSH
4-10-12	GREENDALE RD	601	602	377'	GOOD	MAINTENANCE	FLUSH
4-10-12	TRI HILL DR	674	675	275'	GOOD	MAINTENANCE	FLUSH
4-10-12	HIGHLAND RD	742	743	310'	GOOD	MAINTENANCE	FLUSH
4-10-12	SIPHON	1353	1352	334'	GOOD	MAINTENANCE	FLUSH
4-09-12	COUNTRY CLUB RD	908	909	199'	GOOD	MAINTENANCE	FLUSH
4-09-12	SMALLBROOK LN	947	948	146'	GOOD	MAINTENANCE	FLUSH
4-09-12	SMALLBROOK LN	946	947	154'	GOOD	MAINTENANCE	FLUSH
4-09-12	SMALLBROOK LN	946	906	166'	GOOD	MAINTENANCE	FLUSH
4-09-12	YORKSHIRE TERR	926	927	312'	GOOD	MAINTENANCE	FLUSH
4-09-12	YORKSHIRE TERR	925	926	155'	GOOD	MAINTENANCE	FLUSH
4-09-12	YORKSHIRE TERR	925	924	148'	GOOD	MAINTENANCE	FLUSH
4-09-12	RATHON RD	626	625	186'	GOOD	MAINTENANCE	FLUSH
4-09-12	RATHON RD	626	627	80'	GOOD	MAINTENANCE	FLUSH
4-16-12	HOLLYWOOD DR	296	296A	126'	GOOD	2012 REPAIR	FLUSH
4-19-12	C.C.Y. GOLF COURSE	1331	1332	246'	GOOD	GREASE	FLUSH
4-19-12	C.C.Y. GOLF COURSE	1331	1330	100'	GOOD	GREASE	FLUSH
4-19-12	C.C.Y. GOLF COURSE	1330	1329	165'	GOOD	GREASE	FLUSH
4-19-12	C.C.Y. GOLF COURSE	1264	1328	77'	GOOD	GREASE	FLUSH
4-19-12	C.C.Y. GOLF COURSE	1328	1329	182'	GOOD	GREASE	FLUSH
4-20-12	GLENDALE RD	533	534	333'	GOOD	ROOTS	FLUSH
4-28-12	LANCASTER AVE	176	179	294'	GOOD	MAINTENANCE	FLUSH
4-17-12	HOLLYWOOD DR	310	311	280'	GOOD	ROOTS	FLUSH
5-02-12	OGONTZ ST R.O.W.	297	305	137'	GOOD	MAINTENANCE	FLUSH

EXHIBIT NO. SGT-3
February 5, 2013

DATE	STREET	MH START	MH END	LENGTH	MH CONDITION	COMMENTS	FLUSH
5-30-12	OGONTZ ST	303	304	300'	GOOD	MAINTENANCE	FLUSH
5-30-12	SECOND AVE	84	83	272'	GOOD	MAINTENANCE	FLUSH
5-30-12	MIDLAND AVE	252	253	269'	GOOD	MAINTENANCE	FLUSH
5-30-12	OGONTZ ST	294	295	279'	GOOD	MAINTENANCE	FLUSH
5-30-12	OGONTZ ST	297	305	137'	GOOD	MAINTENANCE	FLUSH
5-30-12	OGONTZ ST	303	304	300'	GOOD	MAINTENANCE	FLUSH
5-30-12	HILL ST	281	282	257'	GOOD	MAINTENANCE	FLUSH
5-30-12	HILL ST	280	281	200'	GOOD	MAINTENANCE	FLUSH
5-30-12	SPRINGDALE AVE	277	278	225'	GOOD	MAINTENANCE	FLUSH
5-30-12	ALBEMARLE ST	222	223	306'	GOOD	MAINTENANCE	FLUSH
5-30-12	ALBEMARLE ST	221	222	113'	GOOD	MAINTENANCE	FLUSH
6-29-12	REGENTS GLENN BLVD	1393	1398	200'	GOOD	MAINTENANCE	FLUSH
6-29-12	REGENTS GLENN BLVD	1392	1393	274'	GOOD	MAINTENANCE	FLUSH
6-29-12	REGENTS GLENN BLVD	1391	1392	400'	GOOD	MAINTENANCE	FLUSH
6-29-12	REGENTS GLENN BLVD	1390	1391	160'	GOOD	MAINTENANCE	FLUSH
6-29-12	REGENTS GLENN BLVD	1389	1390	190'	GOOD	MAINTENANCE	FLUSH
6-29-12	REGENTS GLENN BLVD	1393	1398	200'	GOOD	MAINTENANCE	FLUSH
6-29-12	REGENTS GLENN BLVD	1392	1393	274'	GOOD	MAINTENANCE	FLUSH
6-29-12	REGENTS GLENN BLVD	1391	1392	400'	GOOD	MAINTENANCE	FLUSH
6-29-12	REGENTS GLENN BLVD	1390	1391	160'	GOOD	MAINTENANCE	FLUSH
6-29-12	REGENTS GLENN BLVD	1389	1390	190'	GOOD	MAINTENANCE	FLUSH
6-29-12	BOX HILL LN	1444	1445	150'	GOOD	MAINTENANCE	FLUSH
6-29-12	BOX HILL LN	1444	1446	121'	GOOD	MAINTENANCE	FLUSH
6-29-12	BOX HILL LN	1443	1444	129'	GOOD	MAINTENANCE	FLUSH
6-29-12	BOX HILL LN	1442	1443	207'	GOOD	MAINTENANCE	FLUSH
7-2-12	HOLLYWOOD DR	312	325	328'	GOOD	MAINTENANCE	FLUSH
7-5-12	COPPER BEACH RD	1439	1442	194'	GOOD	MAINTENANCE	FLUSH
7-5-12	COPPER BEACH RD	1438	1439	136'	GOOD	MAINTENANCE	FLUSH
7-5-12	CRESTWAY	1437	1438	244'	GOOD	MAINTENANCE	FLUSH
7-5-12	CRESTWAY	1435	1437	251'	GOOD	MAINTENANCE	FLUSH

DATE	STREET	MH START	MH END	LENGTH	MH CONDITION	COMMENTS	FLUSH
7-5-12	CRESTWAY	1434	1435	242'	GOOD	MAINTENANCE	FLUSH
7-5-12	CRESTWAY	1433	1434	106'	GOOD	MAINTENANCE	FLUSH
7-5-12	CRESTWAY	1431	1433	98'	GOOD	MAINTENANCE	FLUSH
7-5-12	CRESTWAY	1430	1431	250'	GOOD	MAINTENANCE	FLUSH
7-5-12	CRESTWAY	1429	1430	116'	GOOD	MAINTENANCE	FLUSH
7-5-12	CRESTWAY	1427	1429	140'	GOOD	MAINTENANCE	FLUSH
7-5-12	CRESTWAY	1428	1450	173'	GOOD	MAINTENANCE	FLUSH
7-5-12	CRESTWAY	1426	1427	140'	GOOD	MAINTENANCE	FLUSH
7-5-12	CRESTWAY	1425	1426	167'	GOOD	MAINTENANCE	FLUSH
7-9-12	TURNBERRY LN	1486	1487	209'	GOOD	MAINTENANCE	FLUSH
7-9-12	TURNBERRY CT	1488	1489	192'	GOOD	MAINTENANCE	FLUSH
7-9-12	TURNBERRY CT	1485	1488	180'	GOOD	MAINTENANCE	FLUSH
7-9-12	TURNBERRY LN	1485	1486	84'	GOOD	MAINTENANCE	FLUSH
7-9-12	TURNBERRY LN	1484	1485	89'	GOOD	MAINTENANCE	FLUSH
7-9-12	TURNBERRY LN	1483	1484	49'	GOOD	MAINTENANCE	FLUSH
7-9-12	TURNBERRY LN	1482	1483	57'	GOOD	MAINTENANCE	FLUSH
7-9-12	TURNBERRY LN	1425	1482	195'	GOOD	MAINTENANCE	FLUSH
7-9-12	TURNBERRY LN	1424	1425	205'	GOOD	MAINTENANCE	FLUSH
7-9-12	TURNBERRY LN	1388	1424	200'	GOOD	MAINTENANCE	FLUSH
7-9-12	TURNBERRY LN	1388	1389	218'	GOOD	MAINTENANCE	FLUSH
7-9-12	TURNBERRY LN	1388	1387	83'	GOOD	MAINTENANCE	FLUSH
7-13-12	FIELDBROOK CIRCLE	1513	1514	148'	GOOD	MAINTENANCE	FLUSH
7-13-12	FEILDBROOK CIRCLE	1512	1513	160'	GOOD	MAINTENANCE	FLUSH
7-13-12	FEILDBROOK CIRCLE	1511	1512	111'	GOOD	MAINTENANCE	FLUSH
7-13-12	FEILDBROOK CIRCLE	1510	1511	202'	GOOD	MAINTENANCE	FLUSH
7-13-12	FEILDBROOK CIRCLE	1519	1520	126'	GOOD	MAINTENANCE	FLUSH
7-13-12	FEILDBROOK CIRCLE	1518	1519	72'	GOOD	MAINTENANCE	FLUSH
7-13-12	FEILDBROOK CIRCLE	1517	1518	135'	GOOD	MAINTENANCE	FLUSH
7-13-12	FEILDBROOK CIRCLE	1516	1517	26'	GOOD	MAINTENANCE	FLUSH
7-13-12	FEILDBROOK CIRCLE	1515	1516	91'	GOOD	MAINTENANCE	FLUSH

DATE	STREET	MH START	MH END	LENGTH	MH CONDITION	COMMENTS	FLUSH
7-13-12	STONE HAVEN WAY	1509	R.O.W.	150'	GOOD	MAINTENANCE	FLUSH
7-13-12	STONE HAVEN WAY	1509	1515	223'	GOOD	MAINTENANCE	FLUSH
7-13-12	STONE HAVEN WAY	1509	1510	166'	GOOD	MAINTENANCE	FLUSH
1-06-12	SLEEPYHOLLOW RD	698	699	275'	GOOD	MAINTENANCE	FLUSH
1-12-12	SECOND AVE	85	84	387'	GOOD	2013 PAVING	FLUSH
1-19-12	WYNDHAM DR	1645	1644	157'	GOOD	MAINTENANCE	FLUSH
1-19-12	WYNDHAM DR	1643	1644	153'	GOOD	MAINTENANCE	FLUSH
1-19-12	WYNDHAM DR	1642	1643	152'	GOOD	MAINTENANCE	FLUSH
1-30-12	FAIRVIEW TERR	932	933	232'	GOOD	2014 PAVING	FLUSH
1-30-12	FAIRVIEW TERR	931	932	235'	GOOD	2014 PAVING	FLUSH
1-30-12	FAIRVIEW TERR	930	931	250'	GOOD	2014 PAVING	FLUSH
2-08-12	COUNTRY CLUB RD	899	SCHOOL	123'	GOOD	2012 PAVING	FLUSH
2-16-12	VIRGINIA AVE	849	850	279'	GOOD	2014 PAVING	FLUSH
2-16-12	VIRGINIA AVE	860	861	149'	GOOD	2014 PAVING	FLUSH
2-16-12	VIRGINIA AVE	864	865	168'	GOOD	2014 PAVING	FLUSH
2-26-12	STREAMVIEW LN	1503	1504	233'	GOOD	MAINTENANCE	FLUSH
2-26-12	STREAMVIEW LN	1502	1503	214'	GOOD	MAINTENANCE	FLUSH
2-26-12	STREAMVIEW LN	1501	1502	153'	GOOD	MAINTENANCE	FLUSH
2-26-12	STREAMVIEW LN	1499	1501	149'	GOOD	MAINTENANCE	FLUSH
2-26-12	SYCAMORE TERR	1503	1506	129'	GOOD	MAINTENANCE	FLUSH
2-26-12	SYCAMORE TERR	1506	1507	81'	GOOD	MAINTENANCE	FLUSH
4-05-12	SECOND AVE	84	83	272'	GOOD	MAINTENANCE	FLUSH
4-05-12	HILL ST	142	146	365'	GOOD	MAINTENANCE	FLUSH
4-05-12	MIDLAND AVE	252	253	269'	GOOD	MAINTENANCE	FLUSH
4-05-12	OGONTZ ST	294	295	279'	GOOD	MAINTENANCE	FLUSH
4-10-12	OGONTZ ST	297	305	137'	GOOD	MAINTENANCE	FLUSH
4-10-12	OGONTZ ST	298	299	214'	GOOD	MAINTENANCE	FLUSH
5-30-12	HOLLYWOOD TERR	320	321	368'	GOOD	MAINTENANCE	FLUSH
5-30-12	GRANDVIEW RD	323	324	285'	GOOD	MAINTENANCE	FLUSH
5-30-12	GRANDVIEW RD	315	316	218'	GOOD	MAINTENANCE	FLUSH

DATE	STREET	MH START	MH END	LENGTH	MH CONDITION	COMMENTS	FLUSH
5-30-12	HOLLYWOOD DR	310	311	280'	GOOD	MAINTENANCE	FLUSH
6-1-12	GRANDVIEW RD	522	523	400'	GOOD	MAINTENANCE	FLUSH
6-1-12	GLENDALE RD	534	535	400'	GOOD	MAINTENANCE	FLUSH
6-1-12	GLENDALE RD	533	534	333'	GOOD	MAINTENANCE	FLUSH
6-1-12	GREENDALE RD	601	602	377'	GOOD	MAINTENANCE	FLUSH
6-1-12	TRI HILL DR	674	675	275'	GOOD	MAINTENANCE	FLUSH
6-1-12	HIGHLAND RD	742	743	310'	GOOD	MAINTENANCE	FLUSH
6-1-12	SIPHON	1353	1352	334'	GOOD	MAINTENANCE	FLUSH
6-1-12	COUNTRYCLUB RD	908	909	199'	GOOD	MAINTENANCE	FLUSH
6-1-12	SMALLBROOKE LN	947	948	146'	GOOD	MAINTENANCE	FLUSH
6-1-12	SMALLBROOKE LN	946	947	154'	GOOD	MAINTENANCE	FLUSH
6-1-12	SMALLBROOKE LN	946	906	166'	GOOD	MAINTENANCE	FLUSH
6-1-12	YORKSHIRE TERR	926	927	312'	GOOD	MAINTENANCE	FLUSH
6-1-12	YORKSHIRE TERR	925	926	155'	GOOD	MAINTENANCE	FLUSH
6-1-12	YORKSHIRE TERR	925	924	148'	GOOD	MAINTENANCE	FLUSH
6-1-12	RATHON RD	626	625	186'	GOOD	MAINTENANCE	FLUSH
6-1-12	RATHON RD	626	627	80'	GOOD	MAINTENANCE	FLUSH
6-28-12	LAUREL OAK LN	1471	1470	104'	GOOD	MAINTENANCE	FLUSH
6-28-12	LAUREL OAK LN	1471	1472	385'	GOOD	MAINTENANCE	FLUSH
6-28-12	LAUREL OAK LN	1475	1476	171'	GOOD	MAINTENANCE	FLUSH
6-28-12	LAUREL OAK LN	1474	1475	162'	GOOD	MAINTENANCE	FLUSH
6-28-12	LAUREL OAK LN	1473	1474	227'	GOOD	MAINTENANCE	FLUSH
6-28-12	LAUREL OAK LN	1447	1473	117'	GOOD	MAINTENANCE	FLUSH
6-28-12	WINDING OAK DR	1477	1478	113'	GOOD	MAINTENANCE	FLUSH
6-28-12	WINDING OAK DR	1447	1477	118'	GOOD	MAINTENANCE	FLUSH
6-28-12	GLENVIEW DR	1412	1413	116'	GOOD	MAINTENANCE	FLUSH
6-28-12	GLENVIEW DR	1411	1412	179'	GOOD	MAINTENANCE	FLUSH
6-28-12	WINDING OAK DR	1479	1421	195'	GOOD	MAINTENANCE	FLUSH
6-28-12	WINDING OAK DR	1479	1480	146'	GOOD	MAINTENANCE	FLUSH
6-28-12	WINDING OAK DR	1480	1481	153'	GOOD	MAINTENANCE	FLUSH

DATE	STREET	MH START	MH END	LENGTH	MH CONDITION	COMMENTS	FLUSH
6-28-12	OAKWOOD LN	1416	1417	130'	GOOD	MAINTENANCE	FLUSH
6-28-12	OAKWOOD LN	1415	1416	234'	GOOD	MAINTENANCE	FLUSH
6-28-12	OAKWOOD LN	1403	1415	71'	GOOD	MAINTENANCE	FLUSH
6-28-12	GLENVIEW DR	1402	1403	137'	GOOD	MAINTENANCE	FLUSH
6-28-12	GLENVIEW DR	1401	1402	183	GOOD	MAINTENANCE	FLUSH
6-28-12	GLENVIEW DR	1400	1401	160'	GOOD	MAINTENANCE	FLUSH
6-28-12	GLENVIEW DR	1399	1400	154'	GOOD	MAINTENANCE	FLUSH
6-28-12	GLENVIEW DR	1398	1399	152'	GOOD	MAINTENANCE	FLUSH
6-28-12	GLENVIEW DR	1398	1405	318'	GOOD	MAINTENANCE	FLUSH
6-29-12	COUNTRY CLUB RD	1396	1409	231'	GOOD	MAINTENANCE	FLUSH
6-29-12	COUNTRY CLUB RD	1395	1396	143'	GOOD	MAINTENANCE	FLUSH
6-29-12	COUNTRY CLUB RD	1394	1395	301'	GOOD	MAINTENANCE	FLUSH
6-29-12	REGENTS GLENN BLVD	1393	1394	291'	GOOD	MAINTENANCE	FLUSH
7-13-12	STONE HAVEN WAY	1526	1527	345'	GOOD	MAINTENANCE	FLUSH
7-13-12	STONE HAVEN WAY	1528	1526	30'	GOOD	MAINTENANCE	FLUSH
7-13-12	STONE HAVEN WAY	1524	1525	217'	GOOD	MAINTENANCE	FLUSH
7-13-12	ELDERSLIE LN	1524	1528	364'	GOOD	MAINTENANCE	FLUSH
7-13-12	ELDERSLIE LN	1530	1531	295'	GOOD	MAINTENANCE	FLUSH
7-13-12	ELDERSLIE LN	1529	1530	327'	GOOD	MAINTENANCE	FLUSH
7-16-12	CRESTWAY	1548	1549	111'	GOOD	MAINTENANCE	FLUSH
7-16-12	CRESTWAY	1547	1548	140'	GOOD	MAINTENANCE	FLUSH
7-16-12	CRESTWAY	1545	1546	142'	GOOD	MAINTENANCE	FLUSH
7-16-12	CRESTWAY	1544	1545	97'	GOOD	MAINTENANCE	FLUSH
7-16-12	CRESTWAY	1544	1547	163'	GOOD	MAINTENANCE	FLUSH
7-16-12	COPPER BEACH RD	1543	1544	185'	GOOD	MAINTENANCE	FLUSH
7-16-12	COPPER BEACH RD	1542	1543	161'	GOOD	MAINTENANCE	FLUSH
7-16-12	COPPER BEACH RD	1541	1542	179'	GOOD	MAINTENANCE	FLUSH
7-16-12	COPPER BEACH RD	1540	1541	222'	GOOD	MAINTENANCE	FLUSH
7-16-12	COPPER BEACH RD	1539	1540	127'	GOOD	MAINTENANCE	FLUSH
7-16-12	COPPER BEACH RD	1538	1539	152'	GOOD	MAINTENANCE	FLUSH

DATE	STREET	MH START	MH END	LENGTH	MH CONDITION	COMMENTS	FLUSH
7-16-12	COPPER BEACH RD	1536	1537	125'	GOOD	MAINTENANCE	FLUSH
7-16-12	COPPER BEACH RD	1535	1536	158'	GOOD	MAINTENANCE	FLUSH
7-16-12	COPPER BEACH RD	1534	1535	157'	GOOD	MAINTENANCE	FLUSH
7-16-12	COPPER BEACH RD	1550	1534	151'	GOOD	MAINTENANCE	FLUSH
7-16-12	COPPER BEACH RD	1550	1538	151'	GOOD	MAINTENANCE	FLUSH
7-16-12	COPPER BEACH RD	1378	1550	217'	GOOD	MAINTENANCE	FLUSH
7-17-12	STONE HAVEN WAY	1523	1524	364'	GOOD	MAINTENANCE	FLUSH
7-17-12	RANNOCH LN	1522	1523	135'	GOOD	MAINTENANCE	FLUSH
7-17-12	RANNOCH LN	1522	1529	269'	GOOD	MAINTENANCE	FLUSH
7-17-12	RANNOCH LN	1521	1522	141'	GOOD	MAINTENANCE	FLUSH
7-17-12	INDIAN ROCK DAM RD	1385 E	1385 F	200'	GOOD	MAINTENANCE	FLUSH
7-17-12	INDIAN ROCK DAM RD	1385 D	1385 E	350'	GOOD	MAINTENANCE	FLUSH
7-17-12	INDIAN ROCK DAM RD	1385 C	1385 D	400'	GOOD	MAINTENANCE	FLUSH
7-17-12	INDIAN ROCK DAM RD	1521	1385 C	400'	GOOD	MAINTENANCE	FLUSH
7-17-12	INDIAN ROCK DAM RD	1385 B	1521	400'	GOOD	MAINTENANCE	FLUSH
7-17-12	INDIAN ROCK DAM RD	1385 A	1385 B	400'	GOOD	MAINTENANCE	FLUSH
7-19-12	HOLLYWOOD DR	311	312	273'	GOOD	MAINTENANCE	FLUSH
7-20-12	GLENDALE RD	533	534	333'	GOOD	ROOTS	FLUSH
8-10-12	HILLCROFT LN	463	464	264'	GOOD	MAINTENANCE	FLUSH
8-14-12	TRIHILL DR	774	676	230'	GOOD	MAINTENANCE	FLUSH
8-14-12	W. SPRINGETTSBURY AVE	853	854	233'	GOOD	2014 PAVING	FLUSH
8-14-12	W. SPRINGETTSBURY AVE	852	853	308'	GOOD	2014 PAVING	FLUSH
8-24-12	W. SPRINGETTSBURY AVE	853	854	233'	GOOD	2014 PAVING	FLUSH
8-24-12	W. SPRINGETTSBURY AVE	859	860	222'	GOOD	2014 PAVING	FLUSH
8-24-12	W. SPRINGETTSBURY AVE	859	860	222'	GOOD	2014 PAVING	FLUSH
8-24-12	W. SPRINGETTSBURY AVE	858	859	227'	GOOD	2014 PAVING	FLUSH
8-28-12	SOUTHERN RD	131	132	365'	GOOD	MAINTENANCE	FLUSH
8-29-12	CRESTON RD	430	431	272'	GOOD	MAINTENANCE	FLUSH
8-29-12	CRESTON RD	431	432	270'	GOOD	MAINTENANCE	FLUSH
8-29-12	CRESTON RD	436	434	387'	GOOD	MAINTENANCE	FLUSH

DATE	STREET	MH START	MH END	LENGTH	MH CONDITION	COMMENTS	FLUSH
9-18-12	RICHLAND AVE	1544	1545	280'	GOOD	MAINTENANCE	FLUSH
9-26-12	ALBEMARLE ST	185	186	346'	GOOD	MAINTENANCE	FLUSH
10-2-12	GOTWALT ALLEY	23	786	154'	GOOD	MAINTENANCE	FLUSH
11-12-12	HORN ALLEY	888	889	15'	GOOD	MAINTENANCE	FLUSH
11-12-12	HORN ALLEY	889	883	290'	GOOD	MAINTENANCE	FLUSH
11-12-12	HORN ALLEY	886	887	250'	GOOD	MAINTENANCE	FLUSH
11-12-12	HORN ALLEY	887	888	285'	GOOD	MAINTENANCE	FLUSH
11-12-12	OGONTZ ST	297	305	137'	GOOD	MAINTENANCE	FLUSH
12-03-12	HILL ST	274	275	299'	GOOD	MAINTENANCE	FLUSH
12-11-12	GOTWALT ALLEY	23	738	154'	GOOD	MAINTENANCE	FLUSH
12-11-12	LANCASTER AVE	175	176	137'	GOOD	MAINTENANCE	FLUSH
12-11-12	SOUTH ST	176	177	239'	GOOD	MAINTENANCE	FLUSH
12-20-12	GLENDALE RD	534	535	400'	GOOD	MAINTENANCE	FLUSH
12-20-12	GLENDALE RD	533	534	333'	GOOD	MAINTENANCE	FLUSH
12-20-12	NILES RD	533	527	343'	GOOD	MAINTENANCE	FLUSH

DATE	STREET	MH START	MH END	LENGTH	MH CONDITION	COMMENTS	TV
1-30-12	FAIRVIEW TERR	931	932	234'	GOOD	2014 PAVING	TV
1-30-12	FAIRVIEW TERR	930	931	247'	GOOD	2014 PAVING	TV
1-06-12	SLEEPYHOLLOW RD	698	699	274'	GOOD	MAINTENANCE	TV
2-24-12	STREAMVIEW LN	1501	1502	152'	GOOD	MAINTENANCE	TV
4-16-12	OGONTZ R.O.W.	296	296A	128'	GOOD	2012 REPAIR	TV
5-02-12	LANCASTER AVE	176	179	295'	GOOD	MAINTENANCE	TV
5-18-12	CRESTON RD R.O.W.	476	435	150'	GOOD	MAINTENANCE	TV
7-2-12	HOLLYWOOD DR	312	325	325'	GOOD	MAINTENANCE	TV
7-19-12	HOLLYWOOD DR	311	312	273'	GOOD	ROOTS	TV
7-20-12	GLENDALE RD	533	534	354'	GOOD	ROOTS	TV
8-14-12	COUNTRY CLUB R.O.W.	853	852	308'	GOOD	GREASE	TV
8-14-12	TRI HILL DR	239 A	238	239'	GOOD	MAINTENANCE	TV
8-27-12	W. SPRINGETTSBURY AVE	859	860	144'	GOOD	2014 PAVING	TV
8-27-12	W. SPRINGETTSBURY AVE	858	859	221'	GOOD	2014 PAVING	TV
8-30-12	CRESTON RD	433	434	387'	GOOD	2014 PAVING	TV
9-18-12	RICHLAND AVE	1544	1545	277'	GOOD	MAINTENANCE	TV
9-28-12	MARKET ST	CITY	38	285'	GOOD	MAINTENANCE	TV
10-2-12	GOTWALT ALLEY	23	783	156'	GOOD	MAINTENANCE	TV
9-26-12	MAPLE ST	185	186	345'	GOOD	MAINTENANCE	TV
11-12-12	HORN ALLEY	887	888	143'	GOOD	2012 REPAIRS	TV
11-12-12	HORN ALLEY	889	889 A	316'	GOOD	2012 REPAIRS	TV
11-12-12	HORN ALLEY	889 A	890	170'	GOOD	2012 REPAIRS	TV
11-12-12	OGONTZ ST R.O.W.	297	305	138'	GOOD	2012 REPAIRS	TV
12-4-12	HILL ST	274	275	300'	GOOD	MAINTENANCE	TV
12-18-12	LANCASTER AVE	175	176	138'	GOOD	MAINTENANCE	TV
12-18-12	SOUTH ST	176	177	240'	GOOD	MAINTENANCE	TV
1-12-12	FIRST AVE	YORK CITY	72	242'	GOOD	2013 PAVING	TV
2-16-12	VIRGINIA AVE	849	850	277'	GOOD	2014 PAVING	TV
2-16-12	VIRGINIA AVE	860	861	143'	GOOD	2014 PAVING	TV
2-16-12	VIRGINIA AVE	864	865	167'	GOOD	2014 PAVING	TV

DATE	STREET	MH START	MH END	LENGTH	MH CONDITION	COMMENTS	TV
1-30-12	FAIRVIEW TERR	932	933	225'	GOOD	2014 PAVING	TV

2012
CHAPTER 94 REPORTS
IN HOUSE REPAIRS

SEWER MAIN REPAIRS

FIRST AVE
- 12ft OF 8in SDR 35 – 52ft UPSTREAM OF MH 66

BROAD ST (R.O.W.)
- 16ft OF 8in SDR 35 – OUT OF MH 435 DOWNSTREAM

GOTWALT ALLEY
- 8in QUICKLOCK REPAIR TO STOP I&I FROM ENTERING YORK TWP MH 23

SEWER MAIN WYE & LATERAL REPLACEMENT
(8in VCP WYE REPLACED W/ 8in SDR WYE & LATERAL REPLACED TO CURB W/ CLEANOUT)

FIRST AVE
- 1425, 1528, 1530

SECOND AVE
- 1428, 1429, 1431

SEWER LATERAL REPLACEMENT
(VCP LATERAL REPLACED W/ 4in SDR 35 & CLEANOUT ADDED @ CURB)

FIRST AVE
- 1330, 1339, 1336, 1332, 1426, 1432,1436, 1425, 1538, 1520, 1615, 1617, 1633

SECOND AVE
- 1403, 1407, 1409, 1413, 1419,1418, 1421, 1434, 1435, 1437, 1505, 1517, 1518, 1536, 1525

OLD FARM LN
- 1625

STORM SEWER REPAIRS

COUNTRY CLUB RD
- 80ft OF 18in CMP REPLACED W/ 18in HDPE

BROCKIE DR
- 30ft OF 30in CMP REPLACED W 30in CAP

C.S.Davidson, Inc.
Excellence in Civil Engineering

EXHIBIT NO. SGT-5
February 5, 2013

APPLICATION FOR PAYMENT

No. 1
Date: 11/6/2012

OWNER: Spring Garden Township
ADDRESS: 558 South Ogontz Street
York, PA 17403

Engineer Project No.: 0270.6.B5.03
Contract:

Re-Bid 2012 Sanitary Sewer Maintenance

CONTRACTOR: Trinity Excavating, Inc.
ADDRESS: 953 Trinity Road Suite 1
York, PA 17408

Application Covers Period Ending:
10/31/2012

The undersigned certifies that all work performed and materials accepted, but not incorporated, for which Application for Payment is hereby made, has been completed in accordance with the Contract Documents, and that the measured quantities of work shown on the attached Payment Schedule are correct. Subject to final verification of quantities by the Engineer upon completion of all work and final inspection. The undersigned further certifies that any and all claims for payment as of the date of this pay period are hereby made, and that no additional claims of any nature will hereafter be made for work completed as of the end of this pay period, excepting only for claims arising from corrections of quantity measurements.

The undersigned certifies that the TOTAL VALUE OF ALL WORK AND MATERIAL TO DATE (5) shown below, less the total amounts previously paid, constitutes the full claim, including retainage, of the Contractor against the Owner as of the date of this pay period.

CONTRACTOR: Trinity Excavating, Inc.

Date: _____ By: _____

Total Value of Contract Items to Date (Itemized on Payment Schedule)		$90,082.50	(1)
Extra Work Approved on Previous Applications			(2)
Extra Work This Application (Attach Detailed Records)		$0.00	(3)
Materials Accepted, not Incorporated in completed work (See Inventory)			(4)
TOTAL VALUE OF ALL WORK & MATERIAL TO DATE		$90,082.50	(5)
Less Amounts Previously Paid			(6)
Total Claim of Contractor (Includes Retainage)		$90,082.50	(7)

**********(ENGINEER APPROVAL)**********

Recommend Retainage of 5% of (1) above. $4,504.13 (8)

NET AMOUNT APPROVED FOR PAYMENT $85,578.38 (9)

Date: _____ Signed: _____ for C.S. DAVIDSON, INC., ENGINEER

CONTRACT BUDGET CONTROL

AUTHORIZATION	DATE	CONTRACT AMOUNT (BASED ON ESTIMATED QUANTITIES)	
		Change Order	Current Contract Amount
Proposal Quantities			$173,610.50
Change Order No. 1			$173,610.50
Change Order No. 2			
Change Order No. 3			
Change Order No. 4			
Change Order No. 5			
Change Order No. 6			
Change Order No. 7			
Change Order No. 8			
Change Order No. 9			
Change Order No. 10			
Change Order No. 11			
Change Order No. 12			
Change Order No. 13			
Change Order No. 14			
Change Order No. 15			
Change Order No. 16			
Change Order No. 17			
Change Order No. 18			
Change Order No. 19			
Change Order No. 20			

C.S.Davidson, Inc.
Excellence in Civil Engineering

PAYMENT SCHEDULE OF CONTRACT ITEMS

FROM:
CONTRACTOR: Trinity Excavating, Inc.
ADDRESS: 953 Trinity Road Suite 1
York, PA 17408

APPLICATION NUMBER: 1
SHEET 1 of 3

PAY PERIOD ENDING: 10/31/2012

CONTRACT DESCRIPTION:

Re-Bid 2012 Sanitary Sewer Maintenance - Project No. 1

TO:
OWNER: Spring Garden Township
ADDRESS: 558 South Ogontz Street
York, PA 17403

TOTAL AMOUNT OF CONTRACT BASED ON ESTIMATED QUANTITIES: **$18,432.50**

Bid Item No.	Description	Proposal Quantity	Unit	Unit Quantity To Date	Contract Unit Price	Total Value To Date
PROJECT NO. 1 BROCKIE DRIVE (MH 963)						
2	**MISCELLANEOUS/SITE WORK PAYMENT ITEMS**					$0.00
2.01	Mobilization	1	Job	0	4500	$0.00
2.01.01	Maintenance and Protection of Traffic	1	Job	0	$1,200.00	$0.00
5	**SANITARY SEWER PAYMENT ITEMS**					
5.01.04.08A	8" Diameter PVC with Full Depth Stone Backfill					$0.00
	(d) 10' - 12' deep	12	L.F.	0	$110.00	$0.00
5.08.01.01	4' diameter 0.01' - 6.00' deep	1	Ea.	0	$1,660.00	$0.00
5.08.01.02	4' diameter 6.01' deep and over	6	V.F.	0	$350.00	$0.00
5.09.03	Standard Frame and Cover	1	Ea.	0	$550.00	$0.00
5.10.08	8" Manhole Drop Connection	6.1	V.F.	0	$125.00	$0.00
5.12.02	Connection to Existing Main	3	Ea.	0	$400.00	$0.00
5.98	Bypass Pumping	1	Job	0	$500.00	$0.00
8	**TRENCH RESTORATION PAYMENT ITEMS**					
8.01	Trench Paving	29	S.Y.	0	$60.00	$0.00
8.03	Temporary Paving	29	S.Y.	0	$100.00	$0.00
	Total Amount of Project No. 1:					**$0.00**

SUBTOTAL OR TOTAL OF CONTRACT ITEMS TO DATE: **$0.00**

PAYMENT SCHEDULE OF CONTRACT ITEMS

FROM:
CONTRACTOR: Trinity Excavating, Inc.
ADDRESS: 953 Trinity Road Suite 1
York, PA 17408

APPLICATION NUMBER: 1
SHEET 2 of 3

PAY PERIOD ENDING: 10/31/2012

CONTRACT DESCRIPTION:

Re-Bid 2012 Sanitary Sewer Maintenance - Project No. 2

TO:
OWNER: Spring Garden Township
ADDRESS: 558 South Ogontz Street
York, PA 17403

TOTAL AMOUNT OF CONTRACT BASED ON ESTIMATED QUANTITIES: **$127,783.00**

Bid Item No.	Description	Proposal Quantity	Unit	Unit Quantity To Date	Contract Unit Price	Total Value To Date
PROJECT NO. 2 HORN ALLEY (MH887 to MH 890)						
2	**MISCELLANEOUS/SITE WORK PAYMENT ITEMS**					
2.01	Mobilization	1	Job	1	$4,500.00	$4,500.00
2.01.01	Maintenance and Protection of Traffic	1	Job	0.75	$1,600.00	$1,200.00
2.02	Clearing and Grubbing	1	Job	1	$1,200.00	$1,200.00
2.06	Erosion and Sedimentation Control	1	Job	1	$900.00	$900.00
2.08.04	Finish Grading and Seeding	1	Job	1	$500.00	$500.00
2.98	Utility Pole Bracing	3	Ea.	3	$1,000.00	$3,000.00
5	**SANITARY SEWER PAYMENT ITEMS**					
	4" Diameter PVC with Full Depth Stone					
5.01.04.04A	Backfill	48	L.F.	30	$38.00	$1,140.00
5.01.04.08	8" Diameter PVC Pipe					
	(b) 6' - 8' deep	35	L.F.	32	$55.00	$1,760.00
	(d) 10' - 12' deep	12	L.F.	26	$75.00	$1,950.00
	8" Diameter PVC with Full Depth Stone					
5.01.04.08A	Backfill					
	(b) 8' - 10' deep	169	L.F.	169	$90.00	$15,210.00
	(d) 10' - 12' deep	290	L.F.	290	$110.00	$31,900.00
5.02.01	PVC Wyes	16	Ea.	16	$140.00	$2,240.00
5.02.02	PVC Elbows	32	Ea.	14	$150.00	$2,100.00
5.08.01.01	4' diameter 0.01' - 6.00' deep	4	Ea.	4	$1,660.00	$6,640.00
5.08.01.02	4' diameter 6.01' deep and over	19.5	V.F.	19.5	$350.00	$6,825.00
5.09.01	Standard Frame and Cover	4	Ea.	4	$550.00	$2,200.00
5.12.01	Connection to Existing Manhole	1	Ea.	0	$600.00	$0.00
5.12.02	Connection to Existing Main	5	Ea.	4	$300.00	$1,200.00
5.12.95	Connection to Existing Lateral	20	Ea.	17	$150.00	$2,550.00
5.98	Bypass Pumping	1	Job	1	$500.00	$500.00
7	**ROADWAY PAYMENT ITEMS**					
7.05.01	Superpave Wearing Course, 9.5mm (1-1/2" Depth)	37	S.Y.	0	$18.00	$0.00
7.08.01.01	Cement Concrete Curb	27	L.F.	35.5	$25.00	$887.50
7.09.01.04	4" Thick Concrete Sidewalk	94	S.F.	140	$12.00	$1,680.00
8	**TRENCH RESTORATION PAYMENT ITEMS**					
8.01	Trench Paving (Municipal)	37	S.Y.	0	$60.00	$0.00
8.01.02	Trench Paving (Parking Lot)	458	S.Y.	0	$60.00	$0.00
8.03	Temporary Paving	28	S.Y.	0	$100.00	$0.00
	Total Amount of Project No. 2:					**$90,082.50**

SUBTOTAL OR TOTAL OF CONTRACT ITEMS TO DATE: $90,082.50

PAYMENT SCHEDULE OF CONTRACT ITEMS

FROM:
CONTRACTOR: Trinity Excavating, Inc.
ADDRESS: 953 Trinity Road Suite 1
York, PA 17408

APPLICATION NUMBER: 1
SHEET 3 of 3

PAY PERIOD ENDING: 10/31/2012

CONTRACT DESCRIPTION:

Re-Bid 2012 Sanitary Sewer Maintenance - Project No. 3

TO:
OWNER: Spring Garden Township
ADDRESS: 558 South Ogontz Street
York, PA 17403

TOTAL AMOUNT OF CONTRACT BASED ON ESTIMATED QUANTITIES: **$27,395.00**

Bid Item No.	Description	Proposal Quantity	Unit	Unit Quantity To Date	Contract Unit Price	Total Value To Date
PROJECT NO. 3 HOLLYWOOD DRIVE AT OGONTZ STREET (MH 297 to MH350)						
2	**MISCELLANEOUS/SITE WORK PAYMENT ITEMS**					
2.01	Mobilization	1	Job	0	$4,500.00	$0.00
2.01.01	Maintenance and Protection of Traffic	1	Job	0	$1,200.00	$0.00
2.02	Clearing and Grubbing	1	Job	0	$1,200.00	$0.00
2.06	Erosion and Sedimentation Control	1	Job	0	$2,800.00	$0.00
2.08.04	Finish Grading and Seeding	1	Job	0	$1,100.00	$0.00
5	**SANITARY SEWER PAYMENT ITEMS**					
5.01.04.08	8" Diameter PVC Pipe					
	(b) 6' - 8' deep	79	L.F.	0	$55.00	$0.00
	(d) 10' - 12' deep	40	L.F.	0	$65.00	$0.00
	8" Diameter PVC with Full Depth Stone					
5.01.04.08A	Backfill					
	(a) 0' - 6' deep	18	L.F.	0	$80.00	$0.00
5.08.01.01	4' diameter 0.01' - 6.00' deep	1	Ea.	0	$1,660.00	$0.00
5.09.01	Standard Frame and Cover	1	Ea.	0	$550.00	$0.00
5.12.01	Connection to Existing Manhole	1	Ea.	0	$600.00	$0.00
5.12.02	Connection to Existing Main	2	Ea.	0	$300.00	$0.00
5.98	Bypass Pumping	1	Job	0	$500.00	$0.00
7	**ROADWAY PAYMENT ITEMS**					
7.08.01.01	Cement Concrete Curb	6	L.F.	0	$100.00	$0.00
8	**TRENCH RESTORATION PAYMENT ITEMS**					
8.01	Trench Paving (Municipal)	25	S.Y.	0	$60.00	$0.00
8.03	Temporary Paving	22	S.Y.	0	$100.00	$0.00
	Total Amount of Project No. 3:					**$0.00**

SUBTOTAL OR TOTAL OF CONTRACT ITEMS TO DATE: **$0.00**

SUBTOTAL OR TOTAL OF PROJECTS 1 THROUGH 3 CONTRACT ITEMS TO DATE: **$90,082.50**

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) 2013	2014	2015	2016	2017	2013-17 Subtotal	2018 2022	2023 2027	2028 2032	2033 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/Nells Richland Avenue (1 Comm. @ 30,000 GPD)	30,000	0	30,000	31&1 29&1A	18,000	12,000	0	0	0	30,000	0	0	0	0	30,000	A68	
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	Rosenmiller 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 - Starcross Road (8 lots @ 350 GPD)	2,800	2,450	350	HI	350	0	0	0	0	350	0	0	0	0	350	T26	YT01
	c. Tract 2 - Starcross Road (1 lot @ 350 GPD)	350	0	350	II&4C	350	0	0	0	0	350	0	0	0	0	350	T26	YT01
6	York College of PA Little Run Lodge Student Housing	60,000	0	60,000	29-1	0	60,000	0	0	0	60,000	0				60,000	K9	
7	Mt. Rose Plaza Mt. Rose Avenue Restaurant (4,000 GPD) Vacant Giant Store (9,000 GPD) Vacant Land (11,000 (GPD)	24,000	0	24,000	32&2	0	0	0	0	0	24,000	0				24,000	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	Darrah (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	York Water Company Grantley Road (1 Lot @ 350 GPD)	350	0	350	II&3S	350	0	0	0	0	350	0				350	K16	SG01
11	Walter Kaltreider Tract 1701 S. Queen St. (Serv. Area 36 - personal care facility)	75,000	0	75,000	21-200	15,000	15,000	15,000	15,000	15,000	75,000	0	0	0	0	75,000	C39N	SG02
12	RESERVED FOR FUTURE USE																	

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) 2013	2014	2015	2016	2017	2013-17 Subtotal	2018 2022	2023 2027	2028 2032	2033 Ultimate	Total Gallons	York City MH No.	Flow Meter
13	Shelly Eckenroth 525 Country Club Road	350	0	350		350	0	0	0	0	350	0				350	K16	SG01
14	York College/Freshman Dorms 725 Grantley Road (York Narrow Fabrics)	15,000	0	15,000		15,000	0	0	0	0	15,000	0				15,000	K16	SG01
15	Wyndham Hills Sewer District #2																	
	a. Summit Circle South & Wyndham Dr. South (1) (22 Lots @ 350 GPD)	4,550	0	4,550	32	1,750	1,750	1,050	0	0	4,550	0				4,550	T26	YT01
	b. Rosewood Lane & Dogwood Circle (1) (13 Lots @ 350 GPD)	4,200	0	4,200	32	1,050	1,050	1,050	1,050	0	4,200	0				4,200	T26	YT01
	c. Southwynd (1) (2) (39 Lots @ 350 GPD)	3,850	0	3,850	31	2,800	1,050	0	0	0	3,850	0				3,850	T26	YT01
	d. Oakdale Drive (1) (11 Lots @ 350 GPD)	1,750	0	1,750	31	1,050	700	0	0	0	1,750	0				1,750	T26	YT01
16	Penn State York Campus 1031 Edgecomb Avenue Auditorium & Library Addition	5,000	0	5,000	17&5	5,000	0	0	0	0	5,000	0				5,000	C39N	SG02A
17	Smallbrook Lane Sewer Extension (16 EDUs @ 350 GPD)	5,600	4,900	700	32	700	0	0	0	0	700	0				700	K16	SG01
18	Wyndham Hills North Side (180 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	T25	
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	K9	
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	1,750	1,750	7,350	1,750				9,100	K16	SG01
24	Unconnected Residential Properties and Vacant Lots - Service Area 29	5,950	350	5,600	varies	1,050	1,050	1,050	1,050	1,050	5,250	350				5,600	K40-2D	
25	Unconnected Residential Properties and Vacant Lots - Service Area 30	6,300	1,050	5,250	varies	1,050	1,050	1,050	1,050	1,050	5,250					5,250	K40-6	

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) 2013	2014	2015	2016	2017	2013-17 Subtotal	2018 2022	2023 2027	2028 2032	2033 Ultimate	Total Gallons	York City MH No.	Flow Meter
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	K50	
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	K48	
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-633	
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	31,150	3,500	27,650	varies	1,750	1,750	1,750	1,750	1,750	8,750	8,750	8,750	1,400	0	27,650	C39N	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	C27-10S	SG03
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	L9-5F	
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	T26	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	T26	YT01
40	Unconnected Residential Properties and Vacant Lots - Service Area 51A	350	0	350	varies	350					350					350	T26	YT01
41	Unconnected Residential Properties and Vacant Lots - Service Area 51B	1,050	0	1,050	varies	350	350	350			1,050					1,050	T26	YT01
42	Unconnected Residential Properties and Vacant Lots - Service Area 53	9,800	0	9,800	varies	1,750	1,750	1,750	1,750	1,750	8,750	1,050				9,800	T26	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) 2013	2014	2015	2016	2017	2013-17 Subtotal	2018 2022	2023 2027	2028 2032	2033 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 28	9,800	0	9,800	varies	350	350	350	350	350	1,750	1,750	1,750	1,750	2,800	9,800	K28	
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	C27-10S	SG03
51	Miscellaneous Industrial Growth (2 EDUs/year @ 350 GPD) - Area 49	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	A58	
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 36	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	A68	
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 38	9,800	0	9,800	varies	350	350	350	350	350	1,750	1,750	1,750	1,750	2,800	9,800	C27-10J	
57	Drover's Bank/Wellspan Richland Avenue & Indian Rock Dam Road	9,300	1,800	7,500	29&1A	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	20&15	500	0	0	0	0	500	0	0	0	0	500	C39N	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) 2013	2014	2015	2016	2017	2013-17 Subtotal	2018 2022	2023 2027	2028 2032	2033 Ultimate	Total Gallons	York City MH No.	Flow Meter
60	Smurfit 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	K9	
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 729 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	17-13	0	4,000	0	0	0	4,000	0	0	0	0	4,000	C27-10S	SG03
64	Rosecroft (Terrace Condos) (100 Townhouses @ 350 GPD)	35,000	0	35,000	34&76	1,000	7,000	7,000	10,000	10,000	35,000	0	0	0	0	35,000	A68	
65	Brookfield (49 Townhouses @ 450 GPD)	22,050	10,050	12,000		5,000	1,750	1,750	1,750	1,750	12,000	0	0	0	0	12,000	A68	
66	Greenleigh (Fairway Villas) (92 Condos/T.Houses @ 350 GPD)	32,200	16,800	15,400	34&78/89	7,000	4,200	4,200	0	0	15,400		0	0	0	15,400	A68	
67	RESERVED FOR FUTURE USE																	
68	Joshua George - Virginia Avenue (1 EDU @ 350 GPD)	350	0	350		350	0	0	0	0	350	0	0	0	0	350	K16	
69	MacGregor S. & Kathleen S. Jones Lot 3 - Brockie Drive (1 EDU @ 350 GPD)	350	0	350		350	0	0	0	0	350	0	0	0	0	350	K16	
70	Copper Ridge (41 EDUs @ 450 GPD)	18,450	10,450	8,000	0	4,000	1,000	1,000	1,000	1,000	8,000	0	0	0	0	8,000	A68	
71	Stonegate (Townhomes) (142 EDUs @ 350 GPD)	49,700	37,950	11,750	0	8,750	1,000	1,000	1,000	0	11,750	0	0	0	0	11,750	A68	
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	A68	
73	Larami Metals (1 Manufacturing @ 350 GPD)	350	0	350	34&1C	0	0	0	0	0	0	350	0	0	0	350	A68	
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	A68	
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	A68	
76	940 S. Beaver Street Extension (1 EDU @ 350 GPD)	350	0	350		0	350	0	0	0	350	0	0	0	0	350	K29	

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) 2013	2014	2015	2016	2017	2013-17 Subtotal	2018 2022	2023 2027	2028 2032	2033 Ultimate	Total Gallons	York City MH No.	Flow Meter
77	Macosko 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	K16	SG01
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	YT01	
79	Fairview Drive Extended (2 EDUs @ 350 GPD)	700	0	700		0	0	0	0	0	0	700	0	0	0	700	YT01	
80	Johnston Controls (40 EDUs @ 350 GPD)	14,000	0	14,000		0	3,500	3,500	3,500	3,500	14,000	0	0	0	0	14,000	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	
N/A	Miscellaneous Devleopment (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:	1,033,100	131,350	901,750		139,900	159,500	90,450	110,950	63,900	564,700	107,250	86,450	52,850	66,500	901,750		
	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 A68	253,450	75,250	178,200		49,800	30,500	23,500	22,300	21,300	147,400	11,900	5,250	5,250	8,400	178,200		
	Tributary to MH T26	142,200	27,050	115,150		16,100	11,200	6,650	50,750	4,200	88,900	7,350	5,250	5,250	8,400	115,150		
	Tributary to MH K9	92,050	350	91,700		3,850	73,850	14,000	0	0	91,700	0	0	0	0	91,700		
	Tributary to MH C27-16	24,000	0	24,000		0	0	0	0	0	24,000	0	0	0	0	24,000		
	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	115,300	19,300	96,000		20,600	5,600	13,100	5,100	5,600	50,000	21,500	19,250	2,450	2,800	96,000		
	Tributary to MH C39N	114,050	5,900	108,150		22,250	16,750	16,750	16,750	16,750	89,250	8,750	8,750	1,400	0	108,150		
	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 K40-2D	5,950	350	5,600		1,050	1,050	1,050	1,050	1,050	5,250	350	0	0	0	5,600		
	Tributary to MH K40-6	6,300	1,050	5,250		1,050	1,050	1,050	1,050	1,050	5,250	0	0	0	0	5,250		
	Tributary to MH K50	6,300	1,050	5,250		1,050	1,050	1,050	1,050	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-633	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 C27-10S	34,800	1,400	33,400		2,100	6,100	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 C27-26	700	0	700		350	350	0	0	0	700	0	0	0	0	700		
	Tributary to MH L12-12	2,100	0	2,100		350	350	350	350	350	1,750	350	0	0	0	2,100		
	Tributary to MH L9-5F	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 K28	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	23,550		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 A58	19,600	0	19,600		700	700	700	700	700	3,500	3,500	3,500	3,500	5,600	19,600		

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) 2013	2014	2015	2016	2017	2013-17 Subtotal	2018 2022	2023 2027	2028 2032	2033 Ultimate	Total Gallons	York City MH No.	Flow Meter
Tributary to MH L9-12	700	0	700		700	0	0	0	0	700	0	0	0	0	700		
Tributary to MH YT01	14,700	0	14,700		0	0	0	0	0	0	7,700	7,000	0	0	14,700		
Tributary to MH A61	14,000	0	14,000		0	3,500	3,500	3,500	3,500	14,000	0	0	0	0	14,000		
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		

C.S. DAVIDSON, INC.

EXHIBIT NO. SGT-7
February 5, 2013

TABULATION OF AVAILABLE
SEWER RESERVE CAPACITY

COLLECTION AND TRANSPORTATION SYSTEM
From: Spring Garden Township

WASTEWATER TREATMENT FACILITY
To: City of York

	2012	2013	2014	2015	2016	2017	Future Years
Existing Flow From Current Users	1,681,513	1,681,513	1,823,776	1,983,276	2,073,726	2,184,676	2,248,576
Projected Flows From Current Users	0	2,363	0	0	0	0	0
Projected Flow Increase From New Customers	0	139,900	159,500	90,450	110,950	63,900	37,650
Total Estimated Wastewater Flows	1,681,513	1,823,776	1,983,276	2,073,726	2,184,676	2,248,576	2,286,226
Percent Usage	55.84%	60.56%	65.86%	68.86%	72.54%	74.67%	75.92%
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	1,329,987	1,187,724	1,028,224	937,774	826,824	762,924	725,274

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 2012 connections (19 connections = 3,150 GPD) not reflected in (1) above.

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

2012
CHAPTER 94 REPORTS
PUMP STATION MAINTENANCE

RICHLAND AVE

- WEEKLY PUMP HR METER RECORDINGS
- WEEKLY BIO BUG TREATMENTS
- WET WELL IS WASHED & SUCKED OUT W/ VAC CON QUARTERLY
- BACK UP GENERATOR IS EXERCISED QUARTERLY
- REPLACED 330 VOLT START CAPACITORS TO PUMPS #1 & #2

WYNDHAM HILLS S. PUMP STATION

- WEEKLY PUMP HR METER RECORDINGS
- WEEKLY BIO BUG TREATMENTS
- WET WELL IS WASHED & SUCKED OUT W/ VAC CON QUARTERLY
- PUMPS ARE GREASED & FILTERS ARE CHANGED AS NEEDED
- GENERATOR EXERCISES WEEKLY & IS CHECKED WEEKLY
- INSTALLED HIGH LEVEVL ALARM FLOAT DIRECTLY TO DIALER
- INSTALLED NEW PARKER SEAL FILTER ASSEMBLIES TO ALL PUMPS

WYNDSONG DR PUMP STATION

- WEEKLY PUMP HR METER RECORDINGS
- WEEKLY BIO BUG TREATMENTS
- WET WELL IS WASHED & SUCKED OUT W/ VAC CON QUARTERLY
- PUMPS ARE GREASED & GLOBES ARE CLEANED AS NEEDED
- GENERATOR EXERCISES WEEKLY & IS CHECKED WEEKLY
- REPLACED 2 FLOATS
- REPLACED FILTER TO SOLINIOD VAVLE ON PUMP #2

Sanitary Sewer Connection
York City

Wendy Stermer-Deardorff

NAME	ADDRESS	SERVICE	AREA	TYPE	DATE ISSUED	DATE CONNECTED	NO OF CONNECTIONS	EQUIVALENT FLOW (GPD	REPLACEMENT ON LOT SEPTIC
HIGH GROVE PROPERTIES	1217 LAUREL OAK	YC	D	R	8/6/2008	10/17/2012	1	350	
GREG KERN	140 RATHTON RD	YC	30	R	1/12/2012	1/13/2012	1	350	REPLACEMENT OF SEPTIC
DINO PRITSIOS	1520 DUNSTER RD	YC	27	R	4/3/2012	4/10/2012	1	350	REPLACEMENT OF SEPTIC
DAVID MARKLEY	1136 HOLLYWOOD TER	YC	37	R	6/7/2012	6/13/2012	1	350	REPLACEMENT OF SEPTIC
GEORGE LEAS	1572 OLD FARM LN	YC	36	R	7/3/2012	7/6/2012	1	350	REPLACEMENT OF SEPTIC
DEREK & KARA SIEGEL	759 GRANDVIEW RD	YC	36	R	7/23/2012	7/26/2012	1	350	REPLACEMENT OF SEPTIC
GARY GILBERT JR	1224 WYNDHAM DR N	YC		R	8/8/2012	8/21/2012	1	350	GRINDER PUMP ADDED
MARION KALTREIDER	320 UPPERRIDGE LN	YC	37	R	8/22/2012	8/29/2012	1	350	REPLACEMENT OF SEPTIC
JIM ALLIWOOD	184 SCARBORO DR	YC	30	R	4/3/2012	4/5/2012	1	350	REPLACEMENT

EXHIBIT NO. SGT-9
February 5, 2013

EXHIBIT NO. SGT-10
February 5, 2013

2013 SANITARY SEWER REPAIRS -ALTERNATE
SPRING GARDEN TOWNSHIP
ENGINEER'S PROJECT NO. 0270.6.B5.04

ITEM #	DESCRIPTION	UNIT	QUANTITY	UNIT PRICE		ESTIMATED TOTAL
PROJECT NO. 1 - FIRST AVE - MH 71 TO MH 72						
2	MISCELLANEOUS/SITE WORK PAYMENT ITEMS					
2.01	MOBILIZATION	Ea.	1.00	$1,000.00		$1,000.00
2.02	CLEARING AND GRUBBING	L.S.	1.00	$500.00		$500.00
2.02.01	TREE AND SHRUB REMOVAL					
	(a) 4"-8" CALIPER	EA.	0.00	$500.00		$0.00
	(b) 9"-17" CALIPER	EA.	2.00	$1,000.00		$2,000.00
	(c) >18" CALIPER	EA.	1.00	$2,000.00		$2,000.00
2.06	EROSION AND SEDIMENTATION CONTROL	L.S.	1.00	$1,000.00		$1,000.00
2.08.04	FINISH GRADING AND SEEDING	L.S.	1.00	$1,000.00		$1,000.00
5	SANITARY SEWER PAYMENT ITEMS					
5.01.04.06	6" DIA. PVC PIPE	L.F.	195.00	$55.00		$10,725.00
5.01.04.08	8" DIA. PVC PIPE					
	(b) 6' - 8' deep	L.F.	0.00	$65.00		$0.00
	(c) 8' - 10' deep	L.F.	170.00	$70.00		$11,900.00
	(d) 10'- 12' deep	L.F.	0.00	$80.00		$0.00
5.02.01	PVC WYES	EA.	13.00	$50.00		$650.00
5.02.02	PVC ELBOWS	EA.	26.00	$30.00		$780.00
5.08.01.81	4' DIAMETER 0.01' - 6.00' DEEP	EA.	2.00	$4,400.00		$8,800.00
5.08.01.82	4' DIAMETER 6.01' DEEP AND OVER	V.F.	6.00	$400.00		$2,400.00
5.09.01	STANDARD FRAME AND COVER	EA.	2.00	$350.00		$700.00
5.12.02	CONNECTION TO EXISTING MAIN	EA.	3.00	$500.00		$1,500.00
5.12.03	CONNECTION TO EXISTING LATERAL	EA.	13.00	$170.00		$2,210.00
5.13	CLEANOUTS	EA.	13.00	$175.00		$2,275.00
5.98	BYPASS PUMPING	L.S.	1.00	$2,000.00		$2,000.00
7	TRENCH RESTORATION PAYMENT ITEMS					
7.08.01.01	CEMENT CONCRETE CURB - VERTICAL	L.F.	78.00	$25.00		$1,950.00
7.09.01.04	4" THICK CONCRETE SIDEWALK	S.Y.	39.00	$10.00		$390.00
8	TRENCH RESTORATION PAYMENT ITEMS					
8.01	TRENCH PAVING	S.Y.	140.00	$50.00		$7,000.00
8.03	TEMPORARY PAVING	S.Y.	140.00	$20.00		$2,800.00
			SUBTOTAL			$63,580.00
			10% CONTIGENCY			$6,360.00
	SUBTOTAL FOR PROJECT NO. 1:		TOTAL			$69,940.00

2013 SANITARY SEWER REPAIRS -ALTERNATE
SPRING GARDEN TOWNSHIP
ENGINEER'S PROJECT NO. 0270.6.B5.04

ITEM #	DESCRIPTION	UNIT	QUANTITY	UNIT PRICE		ESTIMATED TOTAL
PROJECT NO. 2 - W. SPRINGETTESBURY AVE. - MH 852 TO MH 3853						
2	**MISCELLANEOUS/SITE WORK PAYMENT ITEMS**					
2.01	MOBILIZATION	Ea.	1.00	$1,000.00		$1,000.00
2.02	CLEARING AND GRUBBING	L.S.	1.00	$500.00		$500.00
2.02.01	TREE AND SHRUB REMOVAL					
	(a) 4"-8" CALIPER	EA.	2.00	$500.00		$1,000.00
	(b) 9"-17" CALIPER	EA.	2.00	$1,000.00		$2,000.00
	(c) >18" CALIPER	EA.	0.00	$2,000.00		$0.00
2.06	EROSION AND SEDIMENTATION CONTROL	L.S.	1.00	$500.00		$500.00
2.08.04	FINISH GRADING AND SEEDING	L.S.	1.00	$1,000.00		$1,000.00
2.99	EASEMENT	Ea.	1.00	$500.00		$500.00
5	**SANITARY SEWER PAYMENT ITEMS**					
5.01.04.06	6" DIA. PVC PIPE	L.F.	390.00	$55.00		$21,450.00
5.01.04.08	8" DIA. PVC PIPE					
	(a) 0'- 6' deep	L.F.	0.00	$60.00		$0.00
	(b) 6' - 8' deep	L.F.	541.00	$65.00		$35,165.00
5.02.01	PVC WYES	EA.	26.00	$50.00		$1,300.00
5.02.02	PVC ELBOWS	EA.	52.00	$30.00		$1,560.00
5.08.01.81	4' DIAMETER 0.01' - 6.00' DEEP	EA.	3.00	$4,400.00		$13,200.00
5.09.01	STANDARD FRAME AND COVER	EA.	3.00	$350.00		$1,050.00
5.12.02	CONNECTION TO EXISTING MAIN	EA.	1.00	$500.00		$500.00
5.12.03	CONNECTION TO EXISTING LATERAL	EA.	26.00	$170.00		$4,420.00
5.13	CLEANOUTS	EA.	26.00	$175.00		$4,550.00
5.98	BYPASS PUMPING	L.S.	1.00	$2,000.00		$2,000.00
7	**TRENCH RESTORATION PAYMENT ITEMS**					
7.08.01.01	CEMENT CONCRETE CURB - VERTICAL	L.F.	156.00	$25.00		$3,900.00
7.09.01.04	4" THICK CONCRETE SIDEWALK	S.Y.	73.00	$10.00		$730.00
8	**TRENCH RESTORATION PAYMENT ITEMS**					
8.01	TRENCH PAVING	S.Y.	455.00	$50.00		$22,750.00
8.03	TEMPORARY PAVING	S.Y.	455.00	$20.00		$9,100.00
			SUBTOTAL			$128,180.00
			10% CONTIGENCY			$12,820.00
	SUBTOTAL FOR PROJECT NO. 2:		**TOTAL**			$141,000.00

2013 SANITARY SEWER REPAIRS -ALTERNATE
SPRING GARDEN TOWNSHIP
ENGINEER'S PROJECT NO. 0270.6.B5.04

ITEM #	DESCRIPTION	UNIT	QUANTITY	UNIT PRICE		ESTIMATED TOTAL
PROJECT NO. 4 - VIRGINA AVE. - MH 934 TO MH 930						
2	**MISCELLANEOUS/SITE WORK PAYMENT ITEMS**					
2.01	MOBILIZATION	Ea.	1.00	$1,000.00		$1,000.00
2.02	CLEARING AND GRUBBING	L.S.	1.00	$500.00		$500.00
2.06	EROSION AND SEDIMENTATION CONTROL	L.S.	1.00	$200.00		$200.00
2.08.04	FINISH GRADING AND SEEDING	L.S.	1.00	$500.00		$500.00
5	**SANITARY SEWER PAYMENT ITEMS**					
5.01.04.08	8" DIA. PVC PIPE					
	(a) 0' - 6' deep	L.F.	0.00	$60.00		$0.00
	(b) 6' - 8' deep	L.F.	158.00	$65.00		$10,270.00
	(c) 8' - 10' deep	L.F.	0.00	$70.00		$0.00
5.08.01.81	4' DIAMETER 0.01' - 6.00' DEEP	EA.	2.00	$4,400.00		$8,800.00
5.08.01.82	4' DIAMETER 6.01' DEEP AND OVER	V.F.	3.00	$400.00		$1,200.00
5.09.01	STANDARD FRAME AND COVER	EA.	2.00	$350.00		$700.00
5.12.02	CONNECTION TO EXISTING MAIN	EA.	3.00	$500.00		$1,500.00
5.12.04	CONNECTION TO BUILDING SEWER	EA.	0.00	$170.00		$0.00
5.98	BYPASS PUMPING	L.S.	1.00	$2,000.00		$2,000.00
8	**TRENCH RESTORATION PAYMENT ITEMS**					
8.01	TRENCH PAVING	S.Y.	110.00	$50.00		$5,500.00
8.03	TEMPORARY PAVING	S.Y.	110.00	$20.00		$2,200.00
			SUBTOTAL			$34,370.00
			10% CONTIGENCY			$3,440.00
	SUBTOTAL FOR PROJECT NO. 4:		**TOTAL**			$37,810.00

Appendix D
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).

Appendix E
West Manchester Township Chapter 94 Municipal Wasteload Management

2012 CHAPTER 94 MUNICIPAL WASTELOAD MANAGEMENT REPORT – YORK CITY WASTEWATER TREATMENT FACILITY

West Manchester Township
York County, Pennsylvania

March 8, 2013

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 – 2012

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 2012, 12,383 linear feet of Lincolnway area sanitary lines were flushed (refer to Exhibit No. WMT-2), 3995 linear feet were televised (refer to Exhibit No. WMT-3), six (6) blockages were opened, and two (2) 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 2012, a project was undertaken to completely replace three manholes and line four others to reduce infiltration into the system. Also another project was undertaken to reline approximately 410 LF of 8" main using cured in place pipe to prevent infiltration into those pipes.

During December 2012 a system-wide televising and flushing project was begun on the areas tributary to the Market Street and King Street Pump Stations. This project amounted to approximately 74,000 LF of televising. At the time of this report the project is about 90% complete at which time all the results will be analyzed and an assessment report will be prepared.

No overflows of the system occurred during 2012, including the period of October 29-31 during the passage of Hurricane Sandy.

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.

B. Collection System Condition

1. Description of System

The system tributary to York City is divided into twenty-two (22) districts 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 2012, a project was undertaken to completely replace three manholes and line four others to reduce infiltration into the system. Also another project was undertaken to reline approximately 410 LF of 8" main using cured in place pipe to prevent infiltration into those pipes. The Township will continue to flush and televise the system during 2013 to assess and identify sources of inflow and infiltration to the system and to prioritize areas for replacement projects.

C. 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 the pump station capacity was field rated in 2012 at 737 GPM. The meter readings for 2012 indicated the following conditions:

737 gpm Rated in 2012	WEST KING STREET PUMP STATION NO. 1			
	Hours of Operation/Day	Gallons Pumped/Day	Actual Pump Capacity (GPD)	Peaking Factor
Minimum	4.2	152,760		
Average	8.1	292,896		
Maximum	28.3	1,022,085	1,061,280	3.49

The projected 2-year flows are estimated as follows:

	2012	2013	2014	Design Capacity (GPD)
Avg. Daily Flow (GPD)	292,896	293,946	294,996	
Max. Daily Flow (GPD)	1,022,085	1,025,749	1,029,413	1,440,000
% Loading (of Design)	71.0%	71.2%	71.5%	
% Loading (of Capacity)	96.3%	96.7%	97.0%	

The interceptor project initiated to address the hydraulic overload condition of the pump station was completed during December 2009. Exhibit No. WMT-12 is a graph comparing the average daily flows through the pump station for 2009 and

2012. The graph demonstrates a reduction of flow in 2010 and early 2011 through the pump station since completion of the interceptor project. The exception was on July 12th-14th, 2010 when a total of 5.55 inches of rain was recorded at the Dover Wastewater Treatment Plant. Flow tributary to the West Market Street pump station was diverted to the West King Street pump station causing the higher flows reported during this time period. Outside of this event, the 2010 and early 2011 flows are generally lower than flows reported prior to the repair work and are well below the actual reported capacity of the pump station at 865,440 gpd. High rainfall throughout most of 2011 kept flows elevated. During the Tropical Storm Lee flooding event in early September 2011, flows had to be diverted from the West Market Street Pump Station for several days when that pump station was flooded and shut down by high stream flows in the tributary to Codorus Creek. 2012 continued this downward trend in flow with the exception of Hurricane Sandy at the end of October 2012. Flows were regularly at or below 350,000 gpd.

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, slightly more than its 80 GPM design capacity. Meter readings for 2012 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	0.71	5,786		
Average	0.94	7,591		
Maximum	1.30	10,530	194,400	1.38

The projected 2-year flows are estimated as follows:

	2012	2013	2014	Design Capacity (GPD)
Avg. Daily Flow (GPD)	7,591	7,591	7,591	
Max. Daily Flow (GPD)	10,530	10,530	10,530	115,200
% Loading (of Design)	9.1%	9.1%	9.1%	
% Loading (of Capacity)	5.4%	5.4%	5.4%	

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 2012 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	1.29	6,711		
Average	3.08	16,071		
Maximum	4.80	25,056	125,280	1.56

The projected 2-year flows are estimated as follows:

	2012	2013	2014	Design Capacity (GPD)
Avg. Daily Flow (GPD)	16,071	16,421	16,771	
Max. Daily Flow (GPD)	25,056	25,602	26,147	115,200
% Loading (of Design)	21.8%	22.2%	22.7%	
% Loading (of Capacity)	20.0%	20.4%	20.9%	

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 2012 at 814 GPM, slightly below its design capacity of 900 GPM. Meter readings for 2012 indicate the following conditions:

814 gpm Rated in 2012	WEST MARKET STREET PUMP STATION NO. 3			
	Hours of Operation/Day	Gallons Pumped/Day	Actual Pump Capacity (GPD)	Peaking Factor
Minimum	3.0	117,900		
Average	9.3	364,940		
Maximum	16.6	653,809	1,172,160	1.79

The projected 2-year flows are estimated as follows:

	2012	2013	2014	Design Capacity (GPD)
Avg. Daily Flow (GPD)	364,940	370,190	379,340	
Max. Daily Flow (GPD)	653,809	663,215	679,607	1,296,000
% Loading (of Design)	50.4%	51.2%	52.4%	
% Loading (of Capacity)	55.8%	56.6%	58.0%	

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 2012 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	3.50	44,520		
Average	5.07	64,446		
Maximum	9.43	119,931	305,280	1.86

The projected 2-year flows are estimated as follows:

	2012	2013	2014	Design Capacity (GPD)
Avg. Daily Flow (GPD)	64,446	64,446	71,946	
Max. Daily Flow (GPD)	119,931	119,931	133,889	288,000
% Loading (of Design)	41.6%	41.6%	46.5%	
% Loading (of Capacity)	39.3%	39.3%	43.9%	

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. Meter readings for 2008 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	0.10	1,464		
Average	0.41	5,143		
Maximum	1.98	15,686	351,360	3.05

The projected 2-year flows are estimated as follows:

	2012	2013	2014	Design Capacity (GPD)
Avg. Daily Flow (GPD)	5,143	6,143	7,143	
Max. Daily Flow (GPD)	15,686	18,736	21,786	360,000
% Loading (of Design)	4.4%	5.2%	6.1%	
% Loading (of Capacity)	4.5%	5.3%	6.2%	

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

D. Sanitary Sewer Extensions

1. Extensions: No sanitary sewer extensions were constructed during 2012.

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

E. Waste Flow Data

1. Exhibit No. WMT-5 lists the permits issued for new connections in 2012.

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:

2008	2009	2010	2011	2012
14	2	2	0	2

F. SUBSURFACE DISPOSAL SYSTEM REPAIRS

1. Thirteen (13) on-site subsurface disposal system repairs were made during 2012 (refer to Exhibit No. WMT-11).

G. Nutrient Trading Program 2003 thru 2012

1. Zero (0) properties with on-site subsurface disposal systems eliminated in 2012 (refer to Exhibit No. WMT-10).

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

Year	EDUs	Credits Thru 12/31/12
2003	0 EDUs	0
2004	0 EDUs	0
2005	0 EDUs	0
2006	2 EDUs x 4 yrs. X 25 lbs. =	200
2007	0 EDUs	0
2008	0 EDUs	0
2009	0 EDUs	0
2010	2 EDUs x 25 lbs. =	50
2011	0 EDUs	0
2012	0 EDUs	0

H. Customer Base

As of December 31, 2012, the Lincolnway system has:

Residential/Flat Rate Users:	2,154 Accounts (3176 EDU's)
Non-Residential Metered Users:	318 Accounts (512 EDU's)

February 7, 2013

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

EXHIBIT NO. WMT-1

2012 CHAPTER 94 REPORT
Lincolnway Sewer System

Line Flushing

DATE	MANHOLE TO MANHOLE	STREET OR LOCATION	DEBRIS	FEET	PIPE
02/17/12	14 to 15	Market Street	Roots	380	8" Clay
02/17/12	14 to 15	Market Street	Roots	380	8" Clay
02/17/12	14 to 15	Market Street	Clean	380	8" Clay
02/22/12	19 to 20	Altland Avenue	Ok	200	8" Clay
02/22/12	17 to 18	Sumner Street	Ok	136	8" Clay
02/22/12	18 to 19	Sumner Street	Ok	145	8" Clay
02/22/12	14 to 15	Altland Avenue	Ok	122	8" Clay
02/22/12	15 to 16	Altland Avenue	Ok	200	8" Clay
02/22/12	6 to 14	Seward Street	Ok	360	8" Clay
02/28/12	8 to 17	Sumner Street	Good	333	8" Clay
02/28/12	8 to 9	Bannister Street	Good	280	8" Clay
03/02/12	25 to 26	Forrest Street	Roots	300	8" Clay
03/06/12	7 to 8	Bannister Street		246	8" Clay
03/06/12	6 to 7	Bannister Street		246	8" Clay
03/06/12	4 to 7	Bannister Street		210	8" Clay
03/06/12	7 to 9	Bannister Street		350	8" Clay
03/06/12	27 to 28	Forrest Street		176	8" Clay
03/06/12	26 to 27	Forrest Street		253	8" Clay
03/07/12	25 to 26	Forrest Street		390	8" Clay
03/07/12	26 to 25	Forrest Street			8" Clay
03/07/12	24 to 25	Forrest Street	Roots	65' to 70'	8" Clay

EXHIBIT NO. WMT-2

2012 CHAPTER 94 REPORT
Lincolnway Sewer System

Line Flushing

DATE	MANHOLE TO MANHOLE	STREET OR LOCATION	DEBRIS	FEET	PIPE
03/14/12	5 to 6	Ridgeway Drive	Roots	210	8" Clay
04/03/12	76 to 75	Marion Street		240	8" Clay
04/03/12	76 to 77	Marion Street		390	8" Clay
04/20/12	122 to 73	Marion Street		190	8" SDR 35
04/20/12	73 to 110	Marion Street		280	8" SDR 35
04/20/12	122 to 75	Marion Street		270	8" SDR 35
04/26/12	99 to 110	Taxville Road		250	8"
04/26/12	99 to 216	Taxville Road		298	8"
04/27/12	23 to 24	N. Zarfoss Drive	None	400	8"
04/27/12	24 to 24A	N. Zarfoss Drive		330	8"
05/03/12	244 to 245	Charleston Lane		170	8" Clay
05/03/12	186 to 244	Charleston Lane		400	8" Clay
05/03/12	185 to 186	Austin Lane		158	8" Clay
05/03/12	183 to 185	Austin Lane		280	8" Clay
05/18/12		WMT Public Works		400	SDR 35
05/18/12	183 to 185	Austin Lane		280	Ductile Iron
05/18/12	181 to 183	Austin Lane		175	Clay
05/18/12	180 to 181	Shiloh Drive		153	Clay
05/18/12	179 to 180	Shiloh Drive		325	Clay
05/18/12	176 to 179	Shiloh Drive		218	Clay
05/18/12	173 to 176	Shiloh Drive		233	Clay
05/18/12	172 to 173	High Street		220	Clay
05/18/12	171 to 172	Hampton Road		262	Clay

EXHIBIT NO. WMT-2

2012 CHAPTER 94 REPORT
Lincolnway Sewer System

Line Flushing

DATE	MANHOLE TO MANHOLE	STREET OR LOCATION	DEBRIS	FEET	PIPE
07/05/12	162 to 163	Normandie Drive		155	8" Clay
07/05/12	161 to 162	Normandie Drive		151	8" Clay
07/05/12	160 to 161	Normandie Drive		146	8" Clay
07/05/12	159 to 160	Normandie Drive		117	8" Clay
07/05/12	160 to 161	Normandie Drive		146	8" Clay
07/05/12	159 to 160	Normandie Drive		117	8" Clay
07/05/12	158 to 159	Normandie Drive		162	8" Clay

EXHIBIT NO. WMT-2

2012 CHAPTER 94 REPORT
Lincolnway Sewer System

Daily TV Report

DATE	MANHOLE	STREET OR LOCATION	FEET/DEBRIS	PIPE
03/05/12	MH 349 to MH 350	East Berlin Road @Lincolnway Fire Company	110'	8" Ductile Iron
03/05/12	SS-3 to SS-2	East Berlin Road	No Debris 50' 106'	8" Clay
03/14/12	MH 5 to MH 6	Ridgeway Drive	Lat L out of MH Lat R 1 – 4' Roots – JT ? – 5' Lat L – 30' Lat R – 36' Lat L Roots Cut Out – 91' Lat L – 146' Lat R – 190' Lat out of MH Left	8" Clay
03/15/12	MH 24 to MH 25	N. Forrest Street	Lat Cracked Pipe – 48' Lat L Broke Out – 49' Lat R Broke Lat in Main – 54'	8" Clay
03/15/12	MH 25 to MH 24	N. Forrest Street	Roots JT – 3' Lat R – 35' Roots at Joint – 6' Roots at Joint – 10' Roots at Joint – 14' Roots at Joint – 22'	8" Clay
04/27/12	MH 23 to MH 24 MH 24 to MH 24A	Zarfoss Road Zarfoss Road	400' 330'	
05/09/12	MH 76 to MH 78 MH 76 to MH 75	Marion Street Marion Street	390' 240'	8" PVC
	MH 183 to MH 185	Austin Lane	280'	8"
06/06/12	MH 181 to MH 183 MH 181 to MH 180	Shiloh Drive Shiloh Drive	170' 150'	8" Clay
06/29/12	MH 179 to MH 180 MH 179 to MH 176	Shiloh Drive Shiloh Drive	320' 210'	8" Clay

EXHIBIT NO. WMT-3

2012 CHAPTER 94 REPORT
Lincolnway Sewer System

Daily TV Report

DATE	MANHOLE	STREET OR LOCATION	FEET/DEBRIS	PIPE
07/03/12	MH 173 to MH 176	High Street	Ok – 230'	8" Clay
	MH 173 to MH 172	High Street	Roots 2 Joints – 220'	
07/03/12	MH 171 to MH 172	Hampton Road	Ok – 256' – Low Spots	8" Clay
	MH 171 to MH 163	Hampton Road	Low Spots – 253'	

EXHIBIT NO. WMT-3

2012 CHAPTER 94 REPORT

LINCOLNWAY SEWER SYSTEM

Sewer Stops

DATE	ADDRESS	DEBRIS
03/02/12	301 N. Forrest Street	Roots in main line
03/15/12	13 Ridgeway Drive	Roots at lateral at main
04/13/12	1909 Filbert Street	Roots in lateral
07/13/12	1259 W. College Avenue	Roots in lateral
12/10/12	200 N. Berwick Road	Blockage in lateral
12/20/12	326 N. Gotwalt Street	Lateral clogged

EXHIBIT NO. WMT-4

2012 CHAPTER 94 REPORT

Lincolnway Sewer System

Clean Outs Repaired

ADDRESS	REPAIR
1600 Altland Avenue	3" Brass Plug
1970 Niagara Lane	3" Brass Plug

EXHIBIT NO. WMT-4

2012 CHAPTER 94 REPORT
Lincolnway Sewer System

Dig Up Annual Report

DIG UP NO.	DATE	ADDRESS	PROBLEM	WORK PERFORMED
1	01/31/12	MH 277	Top of MH broke off of barrel section	Dug around MH and reattached MH ring to barrel section and sealed
2	02/20/12	King Street Pump Station	Force Main broke	Dug force main up and put clamp coupling on pipe and back filled

EXHIBIT NO. WMT-4

West Manchester Township
Lincolnway Connection Permits Issued January 1, 2012 through December 31, 2012

MUNICIPAL PERMIT NO.	APPLICANT NAME	PROPERTY LOCATION (STREET ADDRESS & SUBDIVISION)	NO. OF UNITS	ASSIGNED FLOW (GPD)
1843	Tracey & Eugene DePasquale	1560 W. Princess Street	1	350
1844	Greggory Webster	45 N. Diamond Street	1	350

EXHIBIT NO. WMT-5

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

EXHIBIT NO. WMT-6
December 31, 2012

Map ID	West King Street Pump Station No. 1	Total	2013	2014	2015	2016	2017	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	350	350	350	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			
	Subtotal	**9,750**	**1,050**	**1,050**	**2,550**	**2,550**	**2,550**	0	**9,750**		
	South Adams Street Pump Station No. 2	**Total**	**2013**	**2014**	**2015**	**2016**	**2017**	**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**	**2013**	**2014**	**2015**	**2016**	**2017**	**Future**			
8	Kinard Trucking	1,000	0	0	0	0	0	1,000		WM01	B40A
10	Penn's Preserve (Helm Coal)	8,750	1,050	2,100	2,100	1,750	1,750	0		WM01	B40A
12	Voith Hydro Ind. Expansion West Manchester Way	4,000	1,000	1,000	1,000	1,000	0	0		WM01	B40A
13	Voith Hydro Testing Lab	500	0	0	0	0	0	500		WM01	B40A
14	Pfaltzgraff West	15,500	500	500	5,000	5,000	4,500	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	0	1,500	1,500	1,500	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	1,000	1,000	0	0	0	0	0		WM01	B40A
								0			
	Subtotal	**66,100**	**5,250**	**9,150**	**14,300**	**13,950**	**12,450**	**11,000**	**66,100**		
	Emig Mill Pump Station No. 7	**Total**	**2013**	**2014**	**2015**	**2016**	**2017**	**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	0	3,000	3,000	3,000	0			
21	J.E. Baker, Rt. 30 West	9,000	0	0	1,500	1,500	1,500	4,500			
								0			
	Subtotal	**28,000**	**1,000**	**1,000**	**5,500**	**5,500**	**5,500**	**9,500**	**28,000**		
	Bull Road Pump Station No. 6	**Total**	**2013**	**2014**	**2015**	**2016**	**2017**	**Future**			
6	UM Care/Normandie Ridge	17,250	0	7,500	5,250	2,250	2,250	0		WM01	B40A
								0			

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

EXHIBIT NO. WMT-6
December 31, 2012

Map ID	West King Street Pump Station No. 1	Total	2013	2014	2015	2016	2017	Future		Flow Meter	York City MH No.
	Subtotal	**17,250**	**0**	**7,500**	**5,250**	**2,250**	**2,250**	**0**	**17,250**		
	Gravity	**Total**	**2013**	**2014**	**2015**	**2016**	**2017**	**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	1,000	0	0	0	0	0	1,000		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	500	500	0	0	0	0		WM01	B40A
17	Delco Plaza Redevelopment	1,500	500	500	500	0	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	1,000	1,000	0	0	0	0		WM01	B40A
23	Leiphart	1,050	350	700	0	0	0	0		WM01	B40A
24	Memorial Hospital	95,000	0	0	0	40,000	0	55,000		WM01	B40A
25	Haviland Road South	2,800	0	0	0	0	0	2,800		WM01	B40A
26	Haviland Road North	1,400	0	0	0	0	0	1,400		WM01	B40A
27	Spring Street	700	0	0	0	350	350	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	700	1,750	1,750	1,750	1,750	1,050		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	**155,900**	**3,750**	**7,650**	**9,050**	**49,900**	**9,900**	**75,650**	**155,900**		
	Grand Total	**278,750**	**11,400**	**26,700**	**37,000**	**74,500**	**33,000**	**96,150**	**278,750**		
	Net Total	**250,750**	**10,400**	**25,700**	**31,500**	**69,000**	**27,500**	**86,650**	**250,750**		

EXHIBIT NO. WMT-7
December 31, 2011

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	2012	2013	2014	2015	2016	2017	Future Years
Existing Flow From Current Users (1)	2,178,513	2,179,038	2,189,438	2,215,138	2,246,638	2,315,638	2,343,138
Projected Flows From Current Users (2)	525	0	0	0	0	0	0
Projected Flow Increase From New Customers (3)	0	10,400	25,700	31,500	69,000	27,500	86,650
Total Estimated Wastewater Flows	2,179,038	2,189,438	2,215,138	2,246,638	2,315,638	2,343,138	2,429,788
Percent Usage	64.20%	64.51%	65.26%	66.19%	68.22%	69.03%	71.59%
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	1,215,162	1,204,762	1,179,062	1,147,562	1,078,562	1,051,062	964,412

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 2012 connections (2 EDUs x 350 gpd = 525) 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.

ASSIGNMENT OF WASTEWATER CONTRIBUTION
OF YORK CITY WASTEWATER TREATMENT PLANT BY CALENDAR QUARTER - 2012

	Jan - Mar	Apr - Jun	Jul - Sep	Oct - Dec	TOTALS	AVG. (GPD) (366 days in 2012)
MANCHESTER TOWNSHIP						
Flow Meters MN01, 02 & 03	84,303,596	73,787,000	77,198,000	97,535,000	332,823,596	
- Pine Hill Farms in York City (1)	(3,822,000)	(3,822,000)	(3,864,000)	(3,864,000)	(15,372,000)	(42,000)
+ Metered	5,739,920	6,377,039	6,825,152	5,054,104	23,996,215	
TOTALS:	86,221,516	76,342,039	80,159,152	98,725,104	341,447,811	932,918
SPRING GARDEN TOWNSHIP						
Flow Meters SG01, 02A & 03	91,200,527	84,374,000	88,407,000	104,531,000	368,512,527	
+ Metered	17,122,860	19,070,051	18,780,236	19,730,504	74,703,651	
+ Unmetered	31,881,850	31,881,850	32,232,200	32,232,200	128,228,100	
+ Flows thru York Township	14,710,485	14,506,110	14,354,600	15,199,361	58,770,556	160,575
- Flows from York Township	(3,759,400)	(3,673,900)	(3,656,400)	(3,691,200)	(14,780,900)	(40,385)
TOTALS:	151,156,322	146,158,111	150,117,636	168,001,865	615,433,934	1,681,513
WEST MANCHESTER TOWNSHIP						
Flow Meter WM01	139,882,545	170,489,043	184,223,022	144,584,000	639,178,610	
- Flow Meter YC01 (City)	(24,705,638)	(33,048,540)	(26,103,015)	(20,951,700)	(104,808,893)	
Flow Meter RI01	15,381,696	15,081,285	17,272,388	14,535,000	62,270,369	
+ Metered	3,861,816	3,403,328	3,403,318	3,459,396	14,127,858	
+ Unmetered	1,624,350	1,624,350	1,642,200	1,642,200	6,533,100	
+ Flows to West York	44,370,244	40,216,173	42,797,768	52,650,619	180,034,804	
TOTALS:	180,415,013	197,765,639	223,235,681	195,919,515	797,335,848	2,178,513
WEST YORK BOROUGH						
Flow Meter WY01	94,384,693	85,430,000	91,125,000	111,856,000	382,795,693	
- Flows from W. Manchester Twp.	(44,370,244)	(40,216,173)	(42,797,768)	(52,650,619)	(180,034,804)	
TOTALS:	50,014,449	45,213,827	48,327,232	59,205,381	202,760,889	553,992
YORK TOWNSHIP						
Flow Meter YT01	151,534,720	134,922,000	131,672,000	150,840,000	568,968,720	
+ Flows thru Spring Garden Twp.	3,759,400	3,673,900	3,656,400	3,691,200	14,780,900	
- Flows from Spring Garden Twp.	(14,710,485)	(14,506,110)	(14,354,600)	(15,199,361)	(58,770,556)	
TOTALS:	140,583,635	124,089,790	120,973,800	139,331,839	524,979,064	1,434,369
NORTH YORK BOROUGH						
Flow Meter NY01	8,689,786	8,561,000	8,337,000	9,777,000	35,364,786	
+ Metered	467,300	426,400	497,500	531,700	1,922,900	
+ Unmetered	6,975,150	6,975,150	7,051,800	7,051,800	28,053,900	
TOTALS:	16,132,236	15,962,550	15,886,300	17,360,500	65,341,586	178,529

(1) Gallons based on 120 units x 350 gallons/day/EDU x number of days in quarter.

West Manchester Township
Lincolnway Sanitary Sewer Reservations as of December 31, 2012

Name of Developer or Landowner	Location of Property	No. of EDU's Reserved
Voith Hydro	East Berlin Road	78
Glenlyn Enterprises	Manchester Court	6
West Manchester Mall, LLC	Loucks Road	160
Susquehanna Real Estate	West York Industrial Park Area	16.29
Westgate Plaza	Kenneth Road	1
Delco Centre	Carlisle Road	9

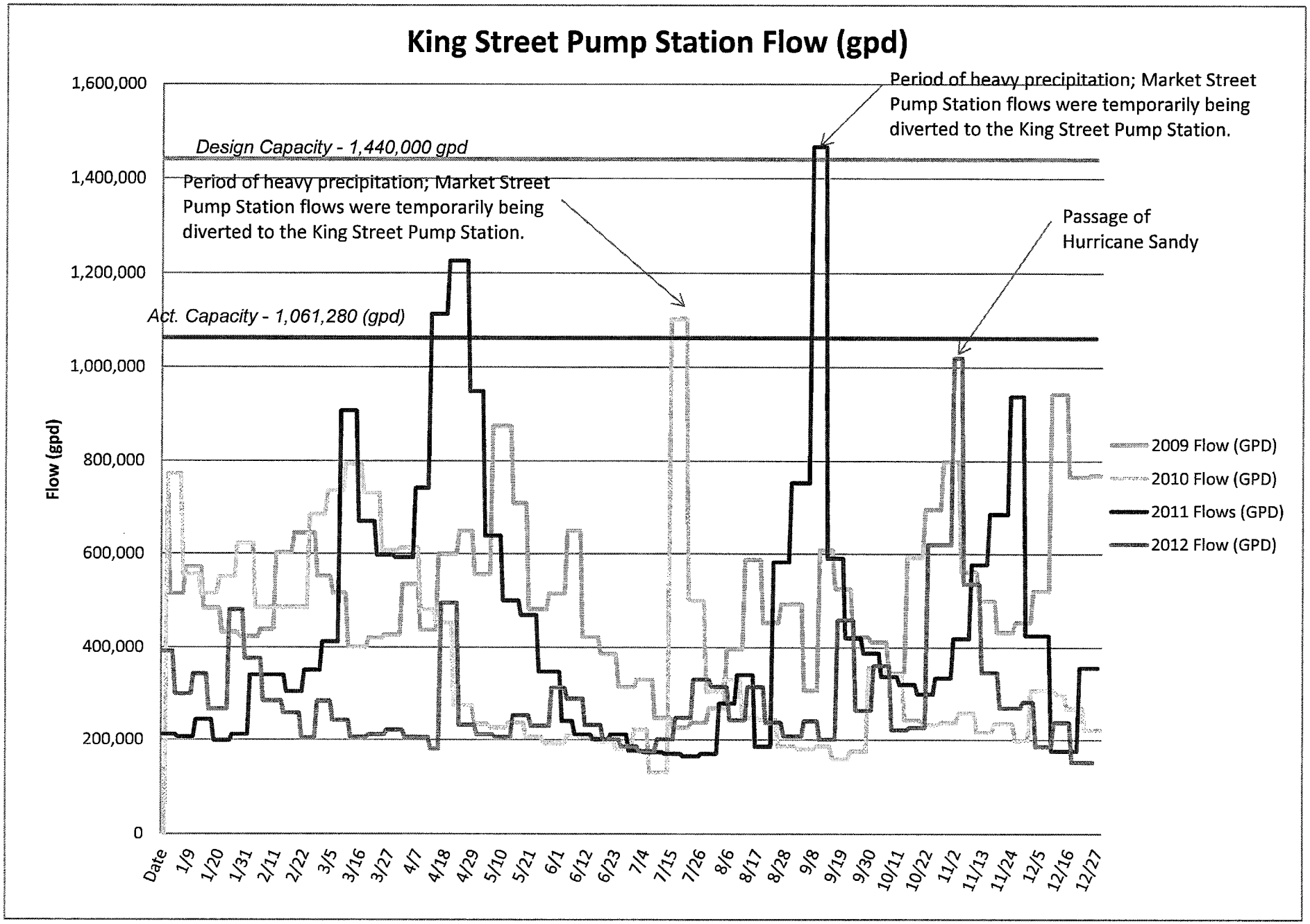
West Manchester Township
Discontinuing on-lot management systems and connecting to the Lincolnway sewer as of December 2012

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

EXHIBIT NO. WMT-10

West Manchester Township
On-Site Septic System Repair - 2012

MUNICIPAL PERMIT NO.	ISSUE DATE	APPLICANT'S NAME	PROPERTY ADDRESS	STATUS OF REPAIRS
Z 68512	1/20/12	Jennifer Forsythe	605 Bairs Road	Completed
Z 68538	3/15/12	Garry Krentz	4160 West Market Street	Completed
Z 109270	5/29/12	C R Property Group LLC	1536 Haviland Road	Completed
Z 098909	5/30/12	Bradley Hartman	853 Smith Drive	Completed
Z 098936	6/7/12	Christopher Miller	4615 Darlington Road	Completed
Z 098946	7/10/12	Barry Goodling	240 Rhonda Drive	Completed
Z 098956	7/25/12	Benjamin McElhaney	50 S. Emig Mill Road	Completed
Z 098919	7/26/12	Ronald Ketner	4585 W. Market Street	Completed
Z 098963	8/6/12	Jerry Morris	130 Margate Road	Completed
Z 109056	8/15/12	4595 West Market Street LLC	4595 W. Market Street	Completed
Z 098972	9/12/12	Kent Flinchbaugh	225 Rhonda Drive	Completed
Z 098952	9/21/12	Newton Willow Jr.	2315 Baker Road	Completed
Z 098940	10/2/12	Cory Ackerman	20 Evergreen Lane	Completed


King Street Pump Station Flow (gpd)
Period of heavy precipitation; Market Street Pump Station flows were temporarily being diverted to the King Street Pump Station.
Design Capacity - 1,440,000 gpd
Period of heavy precipitation; Market Street Pump Station flows were temporarily being diverted to the King Street Pump Station.
Passage of Hurricane Sandy
Act. Capacity - 1,061,280 (gpd)
Flow (gpd)
1,600,000
1,400,000
1,200,000
1,000,000
800,000
600,000
400,000
200,000
0
Date
1/9
1/20
1/31
2/11
2/22
3/5
3/16
3/27
4/7
4/18
4/29
5/10
5/21
6/1
6/12
6/23
7/4
7/15
7/26
8/6
8/17
8/28
9/8
9/19
9/30
10/11
10/22
11/2
11/13
11/24
12/5
12/16
12/27
2009 Flow (GPD)
2010 Flow (GPD)
2011 Flows (GPD)
2012 Flow (GPD)

Appendix F
West York Borough Chapter 94 Municipal Wasteload Management

C.S.Davidson, Inc.
Excellence in Civil Engineering

January 15, 2013

CITY OF YORK – CHAPTER 94
WASTELOAD MANAGEMENT REPORT-2012

WEST YORK BOROUGH

A. System Monitoring Maintenance and Routine Repairs

The Borough does not have personnel and equipment for routine sanitary sewer maintenance and relies on contracted services or on neighboring municipalities. Structural repairs, if necessary, are performed by a local contractor. The Borough's contract with Utility Services Group, Inc. terminated in 2011 and work was rebid in 10/12/12. The 2012-2015 Sanitary Sewer Maintenance Program Contract was awarded to Pipe Services Corporation. Cleaning and flushing of 12,196 L.F. of lines and 52 manholes started on 12/04/12 and was completed on 12/05/12 (see Exhibit No. WYB-1). The contractor did not televise any lines last year. In advance of curb and sidewalk improvements at the Borough's request, West Manchester Township televised sanitary sewers in the following locations in 2012.

West Market Street (North Side): MH 84 to MH 89.
West Market Street (South Side): MH 85 to MH 90

During 2013, the Borough expects to perform the routine pipeline maintenance, as shown on the attached map, involving 20,548 L.F. of mainline flushing and cleaning 86 manholes.

Description	Quantity	Unit
8" diameter pipes to be cleaned	19,800	L.F.
15" diameter pipes to be cleaned	748	L.F.

The Borough intends to televise portions of Monroe Street in 2013 in advance of a Columbia Gas Pipeline replacement project.

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

West York Borough Council has not decided what repairs or rehabilitation work, if any, will be performed in 2013. 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. West York Borough Council will consider a more aggressive TV Inspection Program in 2013.

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. Waste Flow Date

1. No connection permits were issued for connection during 2012.
2. The estimated flows for the current year and projected next five years are shown on the attached charts labeled Exhibit Nos. WYB-3 and WYB-4.
3. The number of sewer connections for each year of the past five years were as follows:

2008	2009	2010	2011	2012
0	0	2	1	0
		(15 EDUs)	(80 EDUs)	

E. Nutrient Trading Program 2003-2012

No properties with on-site subsurface disposal systems were eliminated between 2003 and 2012 (zero credits).

K:\028760011\docs\correspondence\2013-1-22 Chapter 94 Report.doc

C.S.Davidson, Inc.
Excellence in Civil Engineering

EXHIBIT NO. WYB-1

APPLICATION FOR PAYMENT

No. 1 (2012 Contract Final)
Date: 2/1/2013

OWNER: West York Borough Council
ADDRESS: 1700 West Philadelphia Street
York, PA 17404

Engineer Project No.: 0287.6.04.31
Contract: 2012-2015 Sanitary Sewer Maintenance Program

CONTRACTOR: Pipe Services Corporation
ADDRESS: 665 Tower Lane
West Chester, PA 19380

Application Covers Period Ending:
12/31/2012

The undersigned certifies that all work performed and materials accepted, but not incorporated, for which Application for Payment is hereby made, has been completed in accordance with the Contract Documents, and that the measured quantities of work shown on the attached Payment Schedule are correct. Subject to final verification of quantities by the Engineer upon completion of all work and final inspection. The undersigned further certifies that any and all claims for payment as of the date of this pay period are hereby made, and that no additional claims of any nature will hereafter be made for work completed as of the end of this pay period, excepting only for claims arising from corrections of quantity measurements.

The undersigned certifies that the TOTAL VALUE OF ALL WORK AND MATERIAL TO DATE (5) shown below, less the total amounts previously paid, constitutes the full claim, including retainage, of the Contractor against the Owner as of the date of this pay period.

CONTRACTOR: Pipe Services Corporation

Date: _____

By: _____

Total Value of Contract Items to Date (Itemized on Payment Schedule)		$9,100.90 (1)
Extra Work Approved on Previous Applications	_____	(2)
Extra Work This Application (Attach Detailed Records)	_____	$0.00 (3)
Materials Accepted, not Incorporated in completed work (See Inventory)		_____ (4)
TOTAL VALUE OF ALL WORK & MATERIAL TO DATE		$9,100.90 (5)
Less Amounts Previously Paid		_____ (6)
Total Claim of Contractor (Includes Retainage)		$9,100.90 (7)

**********(ENGINEER APPROVAL)**********

Recommend Retainage of 0% of (1) above.	$0.00 (8)
NET AMOUNT APPROVED FOR PAYMENT	$9,100.90 (9)

Date: _____ Signed: _____ for C.S. DAVIDSON, INC., ENGINEER

CONTRACT BUDGET CONTROL

AUTHORIZATION	DATE	CONTRACT AMOUNT (BASED ON ESTIMATED QUANTITIES)	
		Change Order	Current Contract Amount
Proposal Quantities			$66,160.10
Change Order No. 1			$66,160.10
Change Order No. 2			
Change Order No. 3			
Change Order No. 4			
Change Order No. 5			
Change Order No. 6			
Change Order No. 7			
Change Order No. 8			
Change Order No. 9			
Change Order No. 10			
Change Order No. 11			
Change Order No. 12			
Change Order No. 13			
Change Order No. 14			
Change Order No. 15			
Change Order No. 16			
Change Order No. 17			
Change Order No. 18			
Change Order No. 19			
Change Order No. 20			

C.S.Davidson, Inc.
Excellence in Civil Engineering

PAYMENT SCHEDULE OF CONTRACT ITEMS

FROM:
CONTRACTOR: Pipe Services Corporation
ADDRESS: 665 Tower Lane
West Chester, PA 19380

APPLICATION NUMBER: 1 (2012 Contract Final)
SHEET 1 of 3

PAY PERIOD ENDING: 12/31/2012

CONTRACT DESCRIPTION:
2012-2015 Sanitary Sewer Maintenance Program

TO:
OWNER: West York Borough Council
ADDRESS: 1700 West Philadelphia Street
York, PA 17404

TOTAL AMOUNT OF CONTRACT BASED ON ESTIMATED QUANTITIES: $66,160.10

Bid Item No.	Description	Proposal Quantity	Unit	Unit Quantity To Date	Contract Unit Price	Total Value To Date
2012 SANITARY SEWER MAINTENANCE PROGRAM						$0.00
2012.01	8" diameter Pipes (to be cleaned)	8,951	L.F.	8,845	$0.60	$5,307.00
2012.02	12" diameter Pipes (to be cleaned)	1,199	L.F.	1,192	$0.60	$715.20
2012.03	18" diameter Pipes (to be cleaned)	1,210	L.F.	1,203	$0.90	$1,082.70
2012.04	20" diameter Pipes (to be cleaned)	1,011	L.F.	956	$1.00	$956.00
2012.05	Manholes (to be cleaned)	55	Ea.	52	$20.00	$1,040.00
2012.06	8" diameter Pipes (to be televised)	1,690	L.F.	0	$0.00	$0.00
2012.07	Grout Failing Joints	30	Gals	0	$0.00	$0.00
2012.08	Manhole Patching	30	Lbs.	0	$0.00	$0.00
2012.09	Root Inhibitor	10	Lbs.	0	$0.00	$0.00
2012.10	Air Test Joints	20	Ea.	0	$0.00	$0.00
	SUBTOTAL BID AMOUNT FOR YEAR 2012					$9,100.90
2013 SANITARY SEWER MAINTENANCE PROGRAM						
2013.01	8" diameter Pipes (to be cleaned)	19,800	L.F.			$0.00
2013.02	15" diameter Pipes (to be cleaned)	748	L.F.			$0.00
2013.03	Manholes to be cleaned	86	Ea.			$0.00
2013.04	Pipes to be televised (all sizes)	300	L.F.			$0.00
2013.05	Grout Failing Joints	30	Gals.			$0.00
2013.06	Manhole Patching	30	Lbs.			$0.00
2013.07	Root Inhibitor	10	Lbs.			$0.00
2013.08	Air Test Joints	20	Ea.			$0.00
	SUBTOTAL BID AMOUNT FOR YEAR 2013					$0.00

SUBTOTAL OR TOTAL OF CONTRACT ITEMS TO DATE: $9,100.90

BID SCHEDULE

NOTE: Words have been abbreviated as follows:

Word	Abbreviation	Word	Abbreviation
Lineal Feet	L.F.	Each	Ea.
Gallons	Gals.	Pounds	Lbs.
No Estimate	No Est.		

Bid Item No.	Bid Item Description	Estimated Quantity	Unit of Payment	Unit Price	Estimated Total
2012 SANITARY SEWER MAINTENANCE PROGRAM					
2012.01	8" diameter Pipes (to be cleaned)	8,951	L.F.	$ .60	$ 5,370.60
2012.02	12" diameter Pipes (to be cleaned)	1,199	L.F.	$ .60	$ 719.40
2012.03	18" diameter Pipes (to be cleaned)	1,210	L.F.	$ .90	$ 1,089.00
2012.04	20" diameter Pipes (to be cleaned)	1,011	L.F.	$ 1.00	$ 1,011.00
2012.05	Manholes (to be cleaned)	55	Ea.	$ 20.00	$ 1,100.00
2012.06	8" diameter pipes (to be televised)	1,690	L.F.	$ .70	$ 1,183.00
2012.07	Grout Failing Joints	30	Gals	$ 20.00	$ 600.00
2012.08	Manhole Patching	30	Lbs.	$ 65.00	$ 1,950.00
2012.09	Root Inhibitor	10	Lbs.	$ 50.00	$ 500.00
2012.10	Air Test Joints	20	Ea.	$ 25.00	$ 500.00
	SUBTOTAL AMOUNT OF BID FOR YEAR 2012 BASED ON ESTIMATED QUANTITIES:				$ 14,023.00
2013 SANITARY SEWER MAINTENANCE PROGRAM					
2013.01	8" diameter Pipes (to be cleaned)	19,800	L.F.	$ .70	$ 13,860.00
2013.02	15" diameter Pipes (to be cleaned)	748	L.F.	$ .70	$ 523.60
2013.03	Manholes to be cleaned	86	Ea.	$ 20.00	$ 1,720.00
2013.04	Pipes to be televised (all sizes)	300	L.F.	$ 2.00	$ 600.00
2013.05	Grout Failing Joints	30	Gals.	$ 20.00	$ 600.00
2013.06	Manhole Patching	30	Lbs.	$ 65.00	$ 1,950.00

Bid Item No.	Bid Item Description	Estimated Quantity	Unit of Payment	Unit Price	Estimated Total
2013.07	Root Inhibitor	10	Lbs.	$ 54.00	$ 540.00
2013.08	Air Test Joints	20	Ea.	$ 25.00	$ 500.00
	SUBTOTAL AMOUNT OF BID FOR YEAR 2013 BASED ON ESTIMATED QUANTITIES:				$ 20,293.60
2014 SANITARY SEWER MAINTENANCE PROGRAM					
2014.01	8" diameter Pipes (to be cleaned)	10,635	L.F.	$ .70	$ 7,444.50
2014.02	12" diameter Pipes (to be cleaned)	1,835	L.F.	$ .70	$ 1,284.50
2014.03	15" diameter Pipes (to be cleaned)	1,289	L.F.	$ .70	$ 902.30
2014.04	Manholes to be cleaned	46	Ea.	$ 25.00	$ 1,150.00
2014.05	Pipes to be televised (all sizes)	300	L.F.	$ 2.00	$ 600.00
2014.06	Grout Failing Joints	30	Gals	$ 20.00	$ 600.00
2014.07	Manhole Patching	30	Lbs.	$ 65.00	$ 1,950.00
2014.08	Root Inhibitor	10	Lbs.	$ 54.00	$ 540.00
2014.09	Air Test Joints	20	Ea.	$ 25.00	$ 500.00
	SUBTOTAL AMOUNT OF BID FOR YEAR 2014 BASED ON ESTIMATED QUANTITIES:				$ 14,971.30
2015 SANITARY SEWER MAINTENANCE PROGRAM					
2015.01	8" diameter Pipes (to be cleaned)	14,789	L.F.	$ .70	$ 10,352.30
2015.02	12" diameter Pipes (to be cleaned)	409	L.F.	$ .70	$ 286.30
2015.03	15" diameter Pipes (to be cleaned)	428	L.F.	$ .70	$ 299.60
2015.04	Manholes to be cleaned	70	Ea.	$ 25.00	$ 1,750.00
2015.05	Pipes to be televised (all sizes)	300	L.F.	$ 2.00	$ 600.00
2015.06	Grout Failing Joints	30	Gals.	$ 20.00	$ 600.00
2015.07	Manhole Patching	30	Lbs.	$ 65.00	$ 1,950.00
2015.08	Root Inhibitor	10	Lbs.	$ 54.00	$ 540.00
2015.09	Air Test Joints	20	Ea.	$ 25.00	$ 500.00

Bid Item No.	Bid Item Description	Estimated Quantity	Unit of Payment	Unit Price	Estimated Total

SUBTOTAL AMOUNT OF BID FOR YEAR 2015
BASED ON ESTIMATED QUANTITIES: $ 16,878.20

RECAP:

SUBTOTAL 2012: $ 14,023.00

SUBTOTAL 2013: $ 20,293.60

SUBTOTAL 2014: $ 14,971.30

SUBTOTAL 2015: $ 16,878.20

TOTAL AMOUNT OF BID FOR YEARS 2012-2015
BASED ON ESTIMATED QUANTITIES: $ 66,166.10

TOTAL AMOUNT OF BID Sixty-Six Thousand One Hundred
(Use Words)
Sixty-Six Dollars Ten One Hundredths.

SUBMITTED ON October 12 20 12.

TABULATION OF ALL SUBCONTRACTORS

No Subcontractors will be used.

C.S. DAVIDSON, INC.

January 15, 2013
EXHIBIT NO. 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) 2013	2014	2015	2016	2017	13 - '17 Subtotal	2018 2022	2023 2027	2028 2032	2033 Ultimate	Total Gallons	Flow Meter	York City MH No.
1	Ingerman Group 1320 West Market Street 80 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	7/028	3,500	0	0	0	0	3,500	0	0	0	0	3,500	WY01	81
3	Restaurant/Brewery 1608 West King Street (100 EDUs @ 350 GPD)	35,000	7/0007	35,000	0	0	0	0	35,000	0	0	0	0	35,000	WY01	81
4	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
5	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
6	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:	87,247		48,747	2,100	2,100	2,100	2,100	57,147	7,000	7,000	7,000	9,100	87,247		

C.S. DAVIDSON, INC.

EXHIBIT NO. WYB-4
January 15, 2013

TABULATION OF AVAILABLE
SEWER RESERVE CAPACITY

COLLECTION AND TRANSPORTATION SYSTEM
From: West York Borough

WASTEWATER TREATMENT FACILITY
To: City of York

	2012	2013	2014	2015	2016	2017	Future Years
Existing Flow From Current Users	553,992	553,992	602,739	604,839	606,939	609,039	611,139
Projected Flows From Current Users	0	0	0	0	0	0	0
Projected Flow Increase From New Customers	0	48,747	2,100	2,100	2,100	2,100	30,100
Total Estimated Wastewater Flows	553,992	602,739	604,839	606,939	609,039	611,139	641,239
Percent Usage	46.15%	50.21%	50.38%	50.56%	50.73%	50.91%	53.41%
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	646,508	597,761	595,661	593,561	591,461	589,361	559,261

NOTES AND ASSUMPTIONS:

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

(2) Assumes 75% of 2012 connections (0 EDUs @ 350 gpd) not reflected in (1) above.

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

Appendix G
City of York Chapter 94 Municipal Wasteload Management

CITY OF YORK - CHAPTER 94
WASTELOAD MANAGEMENT REPORT - 2012

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 Annual Report for 2012, which is attached. The department is headed by the Sewer Maintenance Supervisor, and has six fill-time employees. Sewer maintenance activities are attached. 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 2012 the Department cleaned 445,934 linear feet of sewer line, which represents 86% 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 sixteen flow meters monitor the sanitary sewer system. Four long-term flow meters are located on the Willis Run interceptor, the Codorus Creek trunkline, the Poor House Run interceptor, and the Arch Street interceptor. Twelve 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.

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 1999 York City Act 537 Plan called for the installation of surcharge indicators in the Tyler

Run and Codorus Trunkline interceptors due to projected capacity restrictions. Monitoring of the flow meters and eight surcharge indicators continued in 2012. Surcharge indicators registered the Tropical Storm Sandy event of October 29-30, 2012 when a total of 6.07 inches of precipitation occurred. All wastewater was contained in the sewer collection and conveyance system.

3. Major Rehabilitation: There were no major replacement or rehabilitation projects in 2012.

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. According to the last five years of data reported in past Chapter 94 documents, the average run times for the two pumps is a combined 115.1 hours per year, which represents an average run time of eleven (11) minutes per day per pump based on a six-day production week.

In 2012, the pumping station engaged a total of 114.2 hours and pumped 2,124,120 gallons of sewage, an average of 6,808 gpd (based on a six-day work week). Industrial park 2012 pump station meter readings are summarized as follows:

Pump	2012 Meter Elapse Time	Gallons Pumped*
Pump 1	56.8 hours	1,056,480
Pump 2	57.4 hours	1,067,640
Total	**114.2hours**	**2,124,120**

*-calculated volume based on pump design of 310 gpm.

D. Sewer Extensions

1. Extensions: There were no sewer extensions in 2012.

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 2012 flow was 2,944,207 gpd. Anticipated flow increases for the next five years are located in Exhibit YC-1.

2. Connections: The number of permits pulled for sewer connections in the City of York for each of the past five years is as follows:

2008*	2009**	2010	2011	2012
9	na	4	na	na

*Data is from January through September 2008.
**Data not available.

In 2012, a number of properties were disconnected from the sanitary sewer system due to parcel consolidation and conversion of multi-family dwellings to single-family dwellings.

(intentionally blank)

SANITARY SEWER MAINTENANCE

The York City Sewer Maintenance division is responsible for the maintenance and repair of over 520,000 linear feet of sanitary sewer line located within the City. The sewer system is a critical component in the operations of the York City WWTP. It conveys the wastewater generated by sewer users in the City, and portions of seven (7) other municipalities, to the WWTP for treatment. A properly maintained sewer system is required to convey the contaminated wastewater from the users in our community to treatment in a manner that protects human health and the environment. Blockages in the sewer system cause sewage overflows and unsanitary living conditions for the users. The maintenance of sewers includes the cleaning and televising of sewer lines, and repairs to mains, laterals, and manholes. The division is also responsible for the maintenance of the City's five flood pump stations. In addition, the Sewer Maintenance division is required to provide PA One call markings for underground sanitary and storm sewer utilities. The division is headed by the Sewer Maintenance Supervisor and has six (6) full time employees.

Major Accomplishments for 2012

The division recorded 188 sewer-related actions or complaints. Sluggish or blocked mains generated 14 complaints. There were 81 complaints related to actual lateral blockages. Five (5) of these were when a plumber was unable to restore service or reported a defect. The department restored service by using sewer-cleaning rods or a Harben. Plumbers addressed the other 76 lateral complaints. Fifteen (15) laterals were inspected with the CCTV equipment. The other complaints resulted in a general investigation or were unrelated to lateral or main malfunctions. A total of 172 trouble reports occurred while on-duty and 16 were call-outs. The call-outs are as follows: six due to main blockages and seven due to reports of lateral blockages.

The division repaired three laterals during 2012. (2011, 2 repairs; 2010: 5 repairs, 2009: 9 repairs, 2008: 4 repairs, 2007: 6 repairs, 2006: 4 repairs, 2005: 3 repairs, 2004: 6 repairs).

The division had one main repair during 2012. A section of 8-inch terra cotta pipe failed on S. West St and required emergency repair.

The department cleaned 445,934 lineal feet of sanitary sewer during 2012 (2011, 257,091; (2010: 182,500; 2009: 245,200; 2008: 163,058; 2007: 135,567). This increase resulted from having a full staff, and less manhole replacement work, and suitable weather for cleaning during January, February, and March. These months are typically too cold to permit all but emergency jetting/cleaning.

No major replacements or rehabilitation took place in 2012. Main Sewer pipe replacement/rehabilitation: 2012: 0 lf; 2011: 3001 lf; 2010: 2707 lf; 2009: 1322 lf; 2008: 817 lf.

The crew televised 0' lineal feet of sanitary sewer mains in 2012. (2011, 1500'; 2010: 6,490'; 2009: 1,278': 2008: 7817'; 2007: 5,024')

In 2012, 4,146 manholes were inspected during cleaning and maintenance activities.

A total of 1 sanitary sewer manhole frame and cover was replaced and adjusted to grade. The department assisted Highway in locating 30 and replacing 3 storm sewer manholes. No manhole cushions were installed. (2011; 17 SS manholes 19 SS due to sewer construction, 3 SWS manholes; 2010: 63 SS manholes, 10 SWS manholes, 2009 – 35 SS manholes, 10 SWS manholes)

The chemical root control program for laterals continued in 2012. Root control was applied to 22 service laterals where homeowners indicated or the division found root problems (2011: 21 laterals; 2010: 50 laterals; 2009: 29 laterals). Root control was applied to 2643' of sewer mains in problem areas (2011, 391').

The department continued its multi-year contract with CSL. This firm collected data and prepared reports from the 15 inter-municipal flow meters and two rain gauges. The information was used for sewer billing collection system capacity evaluation. The performance of the vendor remains excellent. This contract has provided the City with increased value at a lower cost, when compared to the previous service provider.

The department responded to 1,884 requests for PA-One Call utility markings. This is a slight increase from previous year (2011: 1888; 2010: 1709: 2009: 1826: 2008: 2115; 2007: 2113; 2006: 2,066; 2005: 1,727).

Five (5) Flood Pump Stations were inspected and maintained. All five stations were operational and ready for a flood emergency.

Hurricane Sandy provided another significant rain event to the York area and collection system. Recovery to pre-Sandy system flow levels was much sooner than with 2011's TS Lee. This storm event reminds us that these events can occur with varying magnitude and frequency.

The department continues to use a database management system for tracking activities within the department.

The Sewer Emergency Response Team continued to operate for serious sewer related backups.

The department 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. Inventorying and inclusion of the storm water outfalls to the Codorus Creek and tributaries continued as part of the

City's ongoing MS4 program.

A program of preparing detailed inlet maps and piping began in 2012 and will continue into 2013.

The department assisted the Highway crew in paving and excavation projects. It also assisted the Parks Bureau in several projects.

In turn, the Highway Bureau assisted Sewer Maintenance on several patching and manhole projects.

The department continues to assist the WWTP in cleaning and inspection projects.

One employee retired during November and will not be replaced until 2013.

Manholes Raised 2012

Date	Location	MH ID	replaced	adjusted	Notes
3/13/12	North of 427 Boundry Ave (PHR Interceptor)	C36	replaced	adjusted	raised 2 feet
6/1/12	Howard btwn Phila and Gas	D22-2-2A	uncovered		
6/5/12	S Duke @ E Princess NE corner on Duke	D25-29E	uncovered		
4/17/12	intersection of Elm and Albermarle	**Storm**	raised & replaced		
4/17/12	intersection of Elm and Wheatfield - north side	**Storm**	uncovered		
4/18/12	intersection of Prospect and Lancaster	**Storm**	uncovered		
4/18/12	Intersection of Prospect and Albermarle	**Storm**	uncovered		
5/7/12	Edison and Albemarle south side	**Storm**	raised & replaced	7/2/12	
5/7/12	Edison and Tremont:	**Storm**	uncovered		
5/7/12	N West near Lincoln	**Storm**	uncovered		
5/7/12	Newlin and Hart (btwn Merion and Springdale)	**Storm**	uncovered		
5/7/12	Edgar St and E. Jackson	**Storm**	uncovered		
5/7/12	Edgar St and E. Springettsbury	**Storm**	raised & replace	6/28/12	
5/11/12	Fahs and Kelly	**Storm**	uncovered		
5/11/12	Fahs and Chanceford	**Storm**	uncovered		
5/11/12	Calvert and E. Springettsbury	**Storm**	raised & replace	6/28/12	
6/1/12	E Maple @ Girard	**Storm**	uncovered		
6/1/12	E Princess @ Elaine	**Storm**	raised & replace	7/2/12	
6/1/12	E Princess @ Norway	**Storm**	uncovered		
6/1/12	Salem @ S West St	**Storm**	uncovered		
6/5/12	E South @ Keystone	**Storm**	uncovered		
6/7/12	E South @ Girard	**Storm**	raised & replace	7/2/12	
6/5/12	E South @ Courtland	**Storm**	uncovered		
6/5/12	E Maple @ Courtland	**Storm**	uncovered		
6/7/12	E Princess @ Simpson	**Storm**	uncovered		
6/5/12	W King btwn Cherry and George St	**Storm**	uncovered		
6/7/12	Ridge @ Glen	**Storm**	uncovered		
6/11/12	N Queen @ Hay	**Storm**	uncovered		
6/11/12	N. Queen near Soveriegn parking lot (south entrance)	**Storm**	uncovered		
10/3/12	Colony west of Hardwick	**Storm**	uncovered		
10/3/12	Richwill @ Fairlane	**Storm**	uncovered		
10/3/12	Fahs south of Conewago	**Storm**	uncovered		
10/5/12	Kelly at Priority	**Storm**	uncovered		
10/10/12	Lehman @ Wellington	**Storm**	uncovered		

BUCHART HORN, INC.
Strengthening Communities

February 27, 2013

Mr. Jack Longstreet
York City Sanitary Sewer Maintenance Building
1625 Toronita Street
York, PA 17402

Reference: Collection System Review and Operations Consultation
BH No. 90015-R3

Dear Mr. Longstreet:

I. INSPECTION OVERVIEW

The 2012 annual sewer system review took place on January 24, 2013. Discussions of the system's operation were held with the 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 2013 Collection System Review. However, the 2011 improvements to the both the Poorhouse Run Siphon and the Willis Run siphons appear to be operating properly based on flow meter data and visual inspection through the course of the year.

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

A. Inter-Municipal Flow Meters
   1. The twelve municipal flow meters are currently operating with minimal problems.

B. Main Interceptor Flow Meters
   1. The four main interceptor flow meters are operating with minimal problems. LTM04 was moved to the newly constructed Poorhouse Run Interceptor in January of 2012.

C. Portable Flow Meters
   1. The portable flow meters are not currently being used.

D. Rain Gauges
   1. The two rain gauges are operating with minimal problems.

V. INTERCEPTORS, COLLECTORS AND MANHOLES

A. The manholes with surcharge indicators were all reviewed by BH staff. These manholes were in good condition. The surcharge indicators were measured, cleaned, repaired as needed and reset for the next rain events

Table 1 identifies the 2012 max surcharge for each surcharge indicator. The surcharge indicators were read once during 2012. The surcharge indicators were read on 1/31/2013 as the year end reading done in conjunction with the collections system evaluation.

Table 1
Surcharge Indicator Readings
Feet of Surcharge Above Pipe Crown

Manhole ID	Rim Elevation (ft)	Invert Elevation (ft)	Crown Elevation (ft)	1/31/2013 Reading * (ft)
A2	355.45	339.00	345.65	9.6
A26	361.75	343.48	347.48	14.0
A36	357.03	344.14	348.14	7.0
A37	356.11	344.56	348.56	4.6
A40	363.49	344.60	348.60	5.7
K2T	367.04	349.94	353.90	10.1

Table 1
Surcharge Indicator Readings
Feet of Surcharge Above Pipe Crown

Manhole ID	Rim Elevation (ft)	Invert Elevation (ft)	Crown Elevation (ft)	1/31/2013 Reading * (ft)
T21	385.50	379.42	381.17	0.0
T26	396.10	388.50	390.20	5.7

* Readings are in feet about the sewer pipe crown

VI. FACILITIES

A. Sanitary Sewer Maintenance Building

1. The City of York Collection System Maintenance Department owns and operates the equipment necessary to clean 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.

VII. 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 more than 445,934 feet of sewer in 2012.

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 172 sewer related actions or complaints

2. Trouble spots include the following areas:
   a. S. Penn St. and 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 monthly basis.

a. 216 West King St
b. 738 Edison St
c. 105 East Jackson St.

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. Flow Meters

1. The permanent and municipal flow meters are routinely monitored by the City of York and CSL Service, Inc, the flow metering service provider. Any problems with the flow meters are addressed immediately by CSL.

2. The City of York will be re-bidding the sanitary sewer flow metering services in 2013.

E. 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. 1 replacement or grade adjustment was made in 2012.

3. 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 1,884 PA One Call requests in 2012.

4. 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 22 service laterals in 2012.

5. Each year the department repairs or replaces sewers mains due to damage by other utilities companies or from age and degradation. However, in 2012 the department did not perform any sewer replacements or rehabilitation.

6. CCTV inspection is regularly used by the department to identify pipe deficiencies for both the collection and conveyance system. In 2012 the sewer crew was focused on cleaning and manhole inspections. No CCTV inspection were performed in 2012.

7. 4,146 Manhole inspections were performed in 2012. The inspections were used to determine overall condition of the sewer facilities and to identify potential sources of inflow and infiltration.

F. Infiltration/Inflow

1. The TV camera truck system and the line mate software package are used on an as needed basis.

2. The wastewater collection system has been experiencing excessive inflow during heavy rain events.

3. A total of 8 surcharge indicators are being used to monitor areas predicted to have capacity restrictions. Each of these indicators was visited. The surcharge indicators are generally in good condition.

4. Tropical Storm Sandy event in October was significant storm event which had wide reaching impacts to the City of York collection and conveyance systems. Although these impacts were well distributed through out the City, further analysis indicated several sections of the collection system where future work should become a priority. These sections include Fire Side, East Prospect street and Newberry Street.

G. Staffing

1. The sewer collection system staff consists of one supervisor, Jack Longstreet, one shared secretary with the wastewater treatment plant 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. Various staff members have participated in treatment plant operator training, confined space training, and hazardous waste operations and emergency response training.

VIII. SUMMARY OR RECOMMENDATION

A. Continue to inspect and clean siphons throughout collection system if possible.
B. Continue to monitor surcharge indicators and develop an inspection and maintenance plan for the surcharge indicators.
C. Continue to inspect and clean areas with known grease and root problems.
D. Continue to provide professional development training for the sewer collection system staff.
E. Use information collected during the Tropical Storm Sandy event in conjunction with an interceptor evaluation study to prioritize and prepare designs for improvements needed in those areas impacted by the storm.

F. 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: Stacey MacNeal, York City Sewer Authority
Andy Jantzer, WWTP General Manager
Veronica Whaley, Industrial Pretreatment Compliance and Enforcement Officer
Lawrence A. Lutter, P.E./File

Date	MHFROM	MHTO	Footage
01/03/12	46-3	46-2	362.4
01/04/12	46-3	46-2	362.4
01/06/12	L12-12	L12-11	274.4
01/06/12	L12-11	L12-10	259.8
01/06/12	L12-10	L12-9	259.8
01/06/12	L12-9	L12-8	259.3
01/06/12	L12-8	L12-7	267.8
01/06/12	L12-7	L12-6	270.1
01/06/12	L12-6	L12-5	373.4
01/06/12	L12-5	L12-4	352.7
01/06/12	L12-3	L12-4	172.0
01/06/12	L12-4	L12-4A	235.0
01/06/12	C27-25	C27-24	252.2
01/06/12	C27-24	C27-23	255.6
01/06/12	C27-23	C27-22	245.2
01/06/12	C27-22	C27-21	250.4
01/06/12	C27-21	C27-20	4.0
01/06/12	C27-20	C27-19	365.1
01/06/12	C27-19	C27-18	217.9
01/06/12	C27-18	C27-17	207.6
01/06/12	C27-17	C27-16	214.0
01/06/12	C27-16	C27-15	218.3
01/13/12	C27-34C	C27-34	185.7
01/19/12	F14D	F14B	228.2
01/26/12	F15-7-9	F15-7-8	275.0
01/30/12	H17-2A	H17-2	76.1
01/30/12	H17-1C	H17-1	103.7
01/30/12	B10-31	B10-30	30.9
01/30/12	H17-2	H17-1	25.6
01/30/12	B35H	B35B	352
01/30/12	B35D	B35C	348.4
01/30/12	B35C	B35B	202.8
01/30/12	B37A	B37	269.2
01/30/12	B37B	B37A	270.4
01/30/12	B37D	B37	200.8
01/30/12	B37E	B37	58.4
01/30/12	B36A	B36	171.3
01/30/12	B36N	B36M	309
01/30/12	B36C	B36B	207.6
01/30/12	B36D	B36C	177.7
01/30/12	B36E	B36D	178.3
01/30/12	B36H	B36C	266.0
01/30/12	B36J	B36H	181.1
01/30/12	B36I	B36H	201.1
01/30/12	B38-3	B38-2	287.5
01/30/12	B38-1	B38	185.4
01/30/12	B35A	B35	179.0
01/31/12	H2-5A	H2-5	168.3
01/31/12	H2-5B	H2-5	92.3
01/31/12	H2-5	H2-4	253.8
01/31/12	H2-4	H2-3	246.9
01/31/12	H2-3	H2-2	249.6
01/31/12	H2-2	H2-1	250.1
01/31/12	H2-2A	H2-1	84.6
02/01/12	H5	H4B	119.7
02/01/12	H4B	H4	123.4
02/01/12	H4A	H4	196.8
02/01/12	H4	H3	176.5
02/01/12	H3	H2	200.2
02/01/12	H2	H1	261.2
02/01/12	H1A	H1	248.2
02/01/12	H1E	H1	203.1
02/01/12	H10	H9	265.8
02/01/12	H9B	H9A	203.6
02/01/12	H9A	H9	202.1
02/01/12	H8B	H8A	118.8
02/01/12	H8A	H8	191.9
02/01/12	H9	H8	243.4
02/01/12	H8C	H8	387
02/01/12	H7B	H7A	230.4
02/01/12	H7A-1	H7A	75.5
02/01/12	H7A	H7	250
02/01/12	H8	H7	250
02/01/12	H7D	H7C	262
02/01/12	H7C	H7	18.2
02/01/12	H7	H6	118.8
02/01/12	H6	H5	161.6
02/01/12	H5B	H5A	129.7
02/01/12	H5A	H5	23.3
02/01/12	H2D	H2C	192.8
02/01/12	H2C	H2B	237.5
02/01/12	H2E	H2B	202.2
02/01/12	H2B	H2A	257.7
02/01/12	H2A	H2	251.1
02/01/12	H2-1	H2	297.2
02/01/12	H1H	H1G	97.6
02/01/12	H1G	H1F	143
02/01/12	H1F	H1E	137.7
02/01/12	H1D	H1C	110.8
02/01/12	H1C	H1B	174
02/01/12	H1B	H1A	278.5
02/01/12	F1-7	F1-6	253.1
02/01/12	F1-6A	F1-6	340.9
02/01/12	F1-6	F1-5	256.1
02/02/12	B36	B35	284.8
02/02/12	B35	B34	127
02/02/12	B34	B33	201
02/02/12	B35-1A	B35-1	305
02/02/12	B33A-1	B33A	210.9
02/06/12	B15B	B15A	227.4
02/06/12	B15D	B15B	225.7
02/06/12	B14B	B14A	301.5
02/06/12	B14C	B14A	178.8
02/06/12	B14D	B14B	140.1
02/06/12	B13A	B13	160.6
02/06/12	B13B	B13B	107.4
02/06/12	B13C	B13B	182.2
02/05/12	45-7E	45-7C	269.3
02/03/12	B20-8A	B20-8	134.1
02/03/12	B20-9	B20-8	186.2

Date	MHFROM	MHTO	Footage
02/03/12	B20-8	B20-7	259.9
02/03/12	B20-7A	B20-7	148.8
02/03/12	B20-7	B20-6	150.3
02/03/12	B20-6	B20-5	179.5
02/03/12	B20-5A	B20-5	193.1
02/03/12	B20-5	B20-4	272.9
02/03/12	B20-4	B20-3	250.6
02/02/12	F1-2D	F1-2C	191.3
02/02/12	F1-2C	F1-2B	274.3
02/02/12	F1-2B	F1-2A	351.6
02/02/12	F1-2E	F1-2A	81.3
02/02/12	F1-5	F1-4	251.5
02/02/12	F1-4	F1-3	250.4
02/02/12	F1-3	F1-2	221.4
02/02/12	F1-2A	F1-2	261.8
02/02/12	30-10	30-9	372.68
02/03/12	30-9	30-8	166.7
02/03/12	30-8A	30-8	189.7
02/03/12	30-8	30-7	194.3
02/03/12	30-7C	30-7B	126.2
02/03/12	30-7B	30-7A	217
02/03/12	30-7D	30-7A	136
02/03/12	30-7A	30-7	344.3
02/03/12	30-7	30-6	136.7
02/03/12	30-6	30-5	223.4
02/03/12	30-5A	30-5	299.7
02/03/12	30-5	30-4	266.2
02/07/12	30-2E	30-2D	279.4
02/07/12	30-2F	30-2D	147.2
02/07/12	30-2D	30-2C	226.3
02/07/12	30-2H	30-2G	246.9
02/07/12	30-2G	30-2C	264
02/07/12	30-2C	30-2B	278.6
02/07/12	30-2B	30-2A	23.4
02/07/12	30-2A	30-2	170.1
02/07/12	30-2-1	30-2	80
02/07/12	30-2	30-1	304.2
02/07/12	30-1	30-1A	70.7
02/10/12	F12B	F12A	166.7
02/10/12	F12A	F12	300.1
02/10/12	F10E	F10B	109.4
02/10/12	F10D	F10C	59.7
02/10/12	F10C	F10B	358.7
02/10/12	K2-2I	K2-2H	275.2
02/13/12	D25-32	D25-31	329.7
02/13/12	F12E	F12D	170
02/13/12	F12D	F12B	223.1
02/13/12	F12C	F12B	203.7
02/13/12	F12B	F12A	166.7
02/13/12	F12A	F12	300.1
02/13/12	F10D	F10C	59.7
02/13/12	F10C	F10B	358.7
02/13/12	F10F	F10A	132.6
02/13/12	F10E	F10B	109.4
02/13/12	F10B	F10A	107.1
02/13/12	F10A	F10	192.7
02/14/12	F21	F20	258.2
02/14/12	F20	F19	275.1
02/14/12	F18-6	F18-5	233.5
02/14/12	F18-5	F18-4	139.1
02/14/12	F18-4A	F18-4	134.7
02/14/12	F18-3B-1	F18-3B	79.7
02/14/12	F18-3B	F18-3A	174.3
02/14/12	F18-3A	F18-3	191.1
02/14/12	F18-4	F18-3	87.2
02/14/12	F12-7B	F12-7A	188.2
02/14/12	F12-7A	F12-7	165.5
02/14/12	F12-7C	F12-7A	90.7
02/14/12	F12-8	F12-7	266.4
02/14/12	F12-7	F12-6	481.8
02/14/12	F12-6	F12-5	146.2
02/14/12	F12-6A	F12-6	252.9
02/15/12	F12-4	F12-3	88.6
02/15/12	F12-5	F12-4	64
02/15/12	F12-6	F12-5	146.2
02/15/12	F12-3	F12-2	164.6
02/15/12	F12-2	F12-1	267.3
02/15/12	F12-1-1	F12-1	201.2
02/15/12	F12-1-2	F12-1-1	202
02/15/12	F12-1-3	F12-1-2	252.5
02/15/12	F12-1-4	F12-1-3	224.7
02/15/12	F12-1-6	F12-1-5	109.9
02/15/12	F12-1-5	F12-1-3	151.9
02/15/12	F12-1E	F12-1A	381.6
02/15/12	F12-1A	F12-1	330.9
02/15/12	F18-1A	F18-1	216.6
02/15/12	F18-3	F18-2	188
02/15/12	F18-2	F18-1	172.2
02/15/12	F15C	F15B	243.6
02/15/12	F15B	F15A	165.7
02/15/12	F15A	F15A1	76
02/15/12	F17F	F17E	179.4
02/15/12	F17E	F17D	111.3
02/15/12	F17D	F17C	254.5
02/15/12	F17C	F17B	133.9
02/15/12	F17B	F17A	92.5
02/16/12	F15-4	F15-3	299.8
02/16/12	F15-3	F15-2	300.3
02/16/12	43-10D	43-10B	197.3
02/16/12	43-10C	43-10B	312
02/17/12	F15-7-11	F15-7-10	210.2
02/17/12	F15-4	F15-3	299.8
02/17/12	F15-3	F15-2	300.3
02/17/12	43-10C	F15-7-4C	298.9
02/17/12	F15-7-4D	F15-7-4C	191.5
02/17/12	F15-7-4F	F15-7-4E	197.8
02/17/12	F15-7-4E	F15-7-4C	199.6
02/17/12	F19	F18A	300.1
02/17/12	F18A	F18	16.7
02/17/12	F18-1	F18-A1	226.6

Date	MHFROM	MHTO	Footage
02/17/12	F18-A1	F18	204.9
02/17/12	F17-1A	F17-1	285.7
02/19/12	B30-2A	B30-2	154.4
02/17/12	43-6D	43-6C	341
02/17/12	43-6C	43-6B	205.4
02/17/12	43-6B	43-6A	277
02/17/12	43-6E	43-6A	171.9
02/17/12	43-6A	43-6	267.4
02/17/12	43-10D	43-10B	197.3
02/17/12	43-10B	43-10A	212.4
02/17/12	43-10A	43-10	40
02/20/12	F15-7-10	F15-7-9	288.7
02/20/12	F15-7-9	F15-7-8	275
02/20/12	F15-7-8C	F15-7-8B	160.4
02/20/12	F15-7-8B	F15-7-8A	24.9
02/20/12	F15-7-8A	F15-7-8	58.1
02/20/12	F15-7-8	F15-7-7	201.4
02/20/12	F15-7-7	F15-7-6	258.7
02/20/12	F15-7-6	F15-7-5	251.1
02/21/12	D25-21	D25-20	284.6
02/21/12	F15-7-4C	F15-7-4	299
02/21/12	F15-7-4B	F15-7-4A	222.4
02/21/12	F15-7-4A	F15-7-4	348.6
02/21/12	F15-7-5	F15-7-4	274.7
02/21/12	F15-7-4	F15-7-3	203
02/21/12	F15-7-3B	F15-7-3	104.3
02/21/12	F15-7-3A	F15-7-3	224.9
02/22/12	61-7F	61-7E	375
02/22/12	59-7	59-6	253.7
02/22/12	59-6	59-5	274.6
02/22/12	59-5	59-4	242.1
02/22/12	59-4	59-3	313.8
02/22/12	59-3A	59-3	265.9
03/06/12	45-7K	45-7J	266.5
03/06/12	45-7J	45-7I	299.7
03/06/12	43-12	43-11	283.4
03/06/12	76-6D	76-6C	354.7
03/06/12	76-6C	76-6B	375.2
03/06/12	F18	F17	315.8
03/06/12	F17A	F17	238.8
03/06/12	F17	F16	213.6
03/06/12	61-7B	61-7A	270.1
03/06/12	61-7A	61-7	175.2
03/06/12	61-7	61-6	14.9
03/06/12	61-8	61-7-1	126.6
03/06/12	61-7-1	61-7	105.3
03/05/12	P7	P6	76.5
03/05/12	P6	P5	230.7
03/05/12	P5	P4	169.1
03/05/12	P4	P3	247.8
03/05/12	P3	P2	244
03/05/12	P2	P1	402.2
03/05/12	MT75	P1	342.9
03/05/12	P9	P8	289
03/05/12	P8	P1	159.6

Date	MHFROM	MHTO	Footage
03/06/12	D25-20	D25-19	289.6
03/07/12	H13-18F	H13-18	250
03/07/12	H13-18	H13-17	247.5
03/07/12	H13-14	H13-13	235.5
03/06/12	45-7I	45-7H	225.5
03/08/12	IP3-3	IP3-2	273.4
03/08/12	IP3-2	IP3-1	170.1
03/08/12	F16	F15	200.2
03/08/12	F15A1	F15	225.2
03/08/12	F15-2	F15-1	159.6
03/08/12	F15-1	F15	175.7
03/09/12	IP3-1	IP2-13	226.8
03/09/12	IP2-13	IP2-12	281.1
03/09/12	IP2-12	IP2-11	401.5
03/09/12	IP2-11	IP2-10	401.4
03/09/12	IP2-10	IP2-9	199.5
03/09/12	IP2-9	IP2-8	304.9
03/08/12	H35Q	H35R	196.6
03/08/12	H35R	H35P	201.5
03/08/12	H35P	H35M	306.6
03/08/12	H35S	H35K	401
03/08/12	H35K	H35L	200.4
03/08/12	H35L	H35M	393.3
03/08/12	H35Q	H35M	360.9
02/24/12	61-8A	61-8	301.1
03/12/12	IP2-16	IP2-15	403.3
03/12/12	IP2-15	IP2-14	230.4
03/12/12	IP2-7	IP2-6	249.8
03/12/12	IP2-6	IP2-5	401.2
03/12/12	IP2-5	IP2-4	399.1
03/12/12	IP2-4	IP2-3	183
03/12/12	IP2-8	IP2-3	232.4
03/12/12	76-2F	76-2E	192.3
03/12/12	76-2E	76-2D	274.2
03/12/12	C37	C36	160.9
03/12/12	C36	C35	184
03/14/12	B38-16B	B38-16A	232.7
03/15/12	D9-7	D9-6	127.8
03/15/12	D9-6	D9-5	279.7
03/16/12	IP2-3	IP2-2	327.1
03/16/12	IP2-2	IP2-1	350
03/16/12	B38-17B	H13-18B	277.5
03/16/12	H13-18B	H13-18A	283.3
03/16/12	H13-18D	H13-18C	54.5
03/16/12	H13-18C-1	H13-18C	165.3
03/16/12	H13-18	H13-18A	218.8
03/16/12	B38-16B	H13-19	264.9
03/16/12	46-3	46-2	362.4
03/16/12	H13-18I	H13-18G	250
03/16/12	H13-18H	H13-18G	69.3
03/15/12	46-3	46-2	362.4
03/15/12	IP3-11	IP3-10	256.1
03/15/12	IP3-9	IP3-8	249
03/15/12	IP3-8	IP3-7	183
03/15/12	IP3-7	IP3-6	215.3

Date	MHFROM	MHTO	Footage
03/15/12	IP3-6	IP3-5	351.3
03/15/12	IP3-5	IP3-4	249
03/15/12	IP3-15	IP3-14	186.4
03/15/12	IP3-14	IP3-13	125
03/15/12	IP3-13	IP3-12	125.7
03/15/12	IP3-12	IP3-7	237
03/19/12	H13-18G	H13-18F	249.7
03/19/12	H13-18K	H13-18F	249.9
03/19/12	H13-18F	H13-18	250
03/19/12	H13-19	H13-18	320.6
03/19/12	H13-18A	H13-18	251.2
03/19/12	B38-17B	B38-17A	292.3
03/19/12	B38-17A	B38-17	300.3
03/19/12	B38-19	B38-18	135.2
03/19/12	B38-18	B38-17	290.6
03/19/12	H35G	H35-F	95.9
03/19/12	IP3-1	H35-F	108.5
03/19/12	H35F	H35-E	308.7
03/19/12	H35E	H35S	346.3
03/19/12	H35S	H35T	351.7
03/20/12	B38-16B	B38-16A	232.7
03/20/12	B38-16A	B38-16	230
03/20/12	B38-17	B38-16	235.7
03/20/12	B38-15B	B38-15A	210.5
03/20/12	B38-15A	B38-15	212.8
03/20/12	B38-16	B38-15	250.5
03/20/12	B38-14B	B38-14A	178.7
03/20/12	B38-14A	B38-14	173.7
03/20/12	B38-15	B38-14	246.9
03/20/12	B38-14	B38-13	167.3
03/20/12	H13-17D	H13-17B	159.6
03/20/12	H13-17C	H13-17B	125.2
03/20/12	H13-17B	H13-17A	260.8
03/20/12	H13-17A	H13-17	159.2
03/20/12	H13-18	H13-17	249.5
03/20/12	H13-17	H13-16	90.6
03/20/12	H13-16	H13-14	249.6
03/20/12	H13-14	H13-13	235.5
03/20/12	H13-13A	H13-13	267.1
03/21/12	H13-13	H13-12	274.8
03/21/12	H13-12	H13-4	275.2
03/21/12	H13-6A	H13-5	206
03/21/12	H13-5	H13-4	223.4
03/21/12	K12-4B	K12-4A	237.2
03/21/12	H13-9	H13-8	175.9
03/21/12	H13-8	H13-7	159.8
03/21/12	H13-7	H13-6A	162.5
03/21/12	H13-6B	H13-6A	166.5
03/21/12	H13-6C	H13-6B	165.3
03/21/12	D9-2	D9-1	264.3
03/22/12	B38-13	B38-12	242
03/22/12	B38-12	B38-11	252.8
03/22/12	B38-11C	B38-11A	73.3
03/22/12	B38-11A	B38-11	97.2
03/22/12	B38-11B	B38-11	247.2
03/22/12	H13-1K	H13-1J	26.6
03/22/12	H13-1J	H13-1B	130.6
03/22/12	H13-1B	H13-1A	136.3
03/22/12	H13-1A	H13-1	281.2
03/22/12	H13-1N	H13-1M	187.7
03/22/12	H13-1M	H13-1L	204.7
03/22/12	H13-1O	H13-1L	278.7
03/22/12	H13-3A	H13-1L	188.6
03/22/12	H13-A	H13-3	262.6
03/22/12	H13-4A	H13-4	245
03/22/12	H13-4A	H13-3	210.2
03/22/12	H13-2B	H13-2A	240.6
03/22/12	H13-2A	H13-2	209.5
03/22/12	H13-1	H13-2	209.3
03/22/12	H13-1I	H13-1G	275
03/22/12	H13-1H	H13-1G	92.4
03/22/12	H13-1G	H13-1F	185.5
03/22/12	H13-1F	H13-1D	121
03/22/12	H13-1E	H13-1D	172.3
03/22/12	H13-1D	H13-1C	235.1
03/22/12	H13-1C	H13-1B	177.2
03/22/12	H13-1L	H13-1K	143.2
03/23/12	D25-26B	D25-26A	187.9
03/23/12	D25-26A	D25-26	276.7
03/23/12	D25-27F	D25-27E	202.5
03/23/12	D25-27E	D25-27C	17.1
03/23/12	D25-27D	D25-27C	242.5
03/23/12	D25-27C	D25-27B	267.8
03/23/12	D25-27G	D25-27B	212.6
03/23/12	D25-27B	D25-27	273.1
03/23/12	D25-29B	D25-29A	189.7
03/23/12	D25-29A	D25-29	325.6
03/23/12	D25-29F	D25-29D	21.8
03/23/12	D25-29E	D25-29D	242.5
03/23/12	D25-29D	D25-29C	275.3
03/23/12	D25-26	D25-251	288.1
03/23/12	B38-11	B38-10	316.9
03/23/12	B38-10	B38-9	319.3
03/23/12	WMTWP	B38-9A	110
03/23/12	B38-9A	B38-9	87
03/23/12	B38-7E	B38-7C	339.1
03/23/12	B38-7C	B38-7B	174.5
03/23/12	B38-7B	B38-7A	269.9
03/23/12	B38-7I	B38-7H	232.1
03/23/12	B38-7H	B38-7G	286.6
03/23/12	B38-7G	B38-7F	284.7
03/26/12	H17D	H17C	199.3
03/26/12	H17-5	H20-5	105.7
03/26/12	H20-4	H20-3	109
03/26/12	B38-14B	H13-18I	237.2
03/26/12	B38-15B	H13-18K	269.4
03/26/12	H28G	H28F	275.7
03/26/12	H28F	H28E	60.1
03/26/12	H28E	H28D	207.2
03/26/12	H28D	H28C	216.5

Date	MHFROM	MHTO	Footage
03/26/12	H28C	H28B	299
03/26/12	H28B	H28A	109.6
03/26/12	H27C	H27B	273.7
03/26/12	H27B	H27A	188.5
03/26/12	H20-3B	H20-3A	248.6
03/26/12	H20-6	H20-5	200.2
03/26/12	H20-5	H20-4	229.5
03/26/12	H20-3A	H20-3	151.2
03/26/12	H20-3	H20-2	22.4
03/26/12	H20-2	H20-1	118.1
03/26/12	H20-1	H20	120.1
03/26/12	H17E	H17D	170.2
03/26/12	H13-5E	H13-5D	162.8
03/26/12	H13-5D	H13-5C	208.5
03/26/12	H13-5C	H13-5B	250.2
03/26/12	H13-5B	H13-5A	163.5
03/26/12	H13-5A	H13-5	290.9
03/26/12	H13-4A	H13-4	245
03/26/12	H17E	H17D	170.2
03/26/12	H17D	H17C	199.3
03/26/12	H17C	H17B	195.8
03/26/12	H17B	H17A	250.1
03/26/12	H17F	H17A	225.6
03/27/12	H17-5	H20-5	105.7
03/27/12	H17-5	H17-4	223.7
03/27/12	H17-4	H17-3	203.6
03/27/12	H17-3	H17-2	253
03/27/12	H17-1B	H17-1A	128
03/27/12	H17-1A	H17-1	251.2
03/27/12	B10-27	B10-26	239.2
03/27/12	B10-26	B10-25	168.8
03/27/12	C21-2F	C21-2E	241.2
03/27/12	C21-2E	C21-2D	12
03/27/12	C21-2D	C21-2C	55.8
03/27/12	C21-2C	C21-2B	162.2
03/27/12	C21-2A	C21-2	401.6
03/27/12	C21-2B	C21-2A	363.3
03/27/12	C21-3	C21-2	227.3
03/28/12	H23	H22	220.6
03/28/12	H22	H21	209.3
03/28/12	H21	H20	209.2
03/28/12	H20	H19	216
03/28/12	H19	H18	203
03/28/12	H18	H17	253
03/28/12	H17-2	H17	234.6
03/28/12	H17A	H17	247.1
03/28/12	B20I	B20H	291.7
03/28/12	B20H	B20G	91.4
03/28/12	B20K	B20S	158.4
03/28/12	B20J	B20G	157.3
03/27/12	C27-2A	C27-2	401.6
03/27/12	C21-2	C21-1	173.1
03/27/12	H25B	H25A	137.4
03/27/12	H25A	B10-27	248.5
03/27/12	B10-29	B10-28	119.2

Date	MHFROM	MHTO	Footage
03/27/12	B10-28	B10-27	141.2
03/27/12	H25	H24	239.2
03/27/12	H24	H23	222.6
03/27/12	B10-25	B10-24	124.3
03/27/12	B10-24	B10-23	406.3
03/27/12	B10-23	B10-22	138.6
03/27/12	B10-22	B10-21	216
03/27/12	B10-21	B10-20	203
03/27/12	B10-20	B10-19	235
03/27/12	H17A	H17	247.1
03/29/12	B10-4A	B10-4	355.9
03/29/12	B10-3E	B10-3D	168.3
03/29/12	B10-3D	B10-3C	174.6
03/29/12	B10-3C	B10-3B	142.6
03/29/12	B10-3B	B10-3A	118
03/29/12	B10-3A-1	B10-3A	53.3
03/29/12	B10-4	B10-3A	65
03/29/12	B10-3A	B10-3	208.1
03/29/12	B10-3	B10-2	204.7
03/29/12	B10-3H	B10-3G	108.8
03/29/12	B10-3G	B10-3F	290.8
03/29/12	B10-3K	B10-3J	128.7
03/29/12	B10-3J	B10-3I	88.9
03/29/12	B10-3I	B10-3H	138.5
03/29/12	B10-3F	B10-3B	293
03/29/12	B10-2A	B10-1A	183
03/29/12	B10-2	B10-1	122
03/29/12	B10-1A	B10B	38
03/29/12	B20L	B20E	329.5
03/29/12	B20M	B20E	310.7
03/29/12	B20G	B20F	165.5
03/29/12	B20F	B20E	144.1
03/29/12	B20A	B20	19.2
03/29/12	B20C	B20A	253.5
03/29/12	B20D	B20C	230.1
03/29/12	B20E	B20D	154.8
03/29/12	B19	B18	220.2
03/29/12	B20	B19	216.8
03/29/12	B20-1	B20	66.6
03/29/12	B18I	B18H	172.7
03/29/12	B18H	B18G	240.9
03/29/12	B18G	B18F	256.5
03/29/12	B18F	B18-1A	250.3
03/29/12	B18E	B18A	117.9
03/29/12	B18A	B18-1A	160
03/30/12	L12-4	L12-3	172
03/30/12	L12-3	L12-2	301.8
03/30/12	L12-2	L12-1	288.6
03/30/12	L13B	L13A	279.2
03/30/12	L15B	L15A	342.7
03/30/12	L10D	L10C	297.8
03/30/12	L10C	L10B	283.6
03/30/12	L10E	L10B	129.7
03/30/12	L10B	L10A	325.9
03/28/12	B18D	B18C	192.3

Date	MHFROM	MHTO	Footage
03/28/12	B18C	B18B	183.6
03/28/12	B18B	B18A	179.3
04/02/12	D9-29	D9-22H	200
04/02/12	C27-10J	C27-10I	169.2
04/02/12	C27-10K	C27-10I	170.1
04/02/12	C27-10I	C27-10H	295.2
04/02/12	C27-10L	C27-10H	123.2
04/02/12	C27-10M	C27-10G	350.1
04/02/12	C27-10F	C27-10E	207.4
04/02/12	C27-10E	C27-10D	192
04/02/12	C27-10N	C27-10D	260.5
04/02/12	C27-10G	C27-10D	319.7
04/02/12	C27-10D	C27-10C	158.6
04/02/12	C27-10C	C27-10A	246.2
04/02/12	C27-10B	C27-10A	286.8
04/02/12	K12-14X	K12-14W	380.7
04/02/12	K12-14W	K12-14V	353
04/02/12	K12-14V	K12-14U	274.7
04/02/12	K12-14U	K12-14T	273
04/02/12	K12-14R	K12-14S	298.7
04/02/12	K12-14S	K12-14T	321.7
04/02/12	K34B	K34A	269.8
04/02/12	K34A	K34	270.8
04/03/12	C27-13F	C27-13E	182.6
04/03/12	C27-13E	C27-13D	150.1
04/03/12	C27-13D	C27-13C	191.6
04/03/12	C27-13C	C27-13B	16.8
04/03/12	C27-13B	C27-13A	190
04/03/12	C27-4C	C27-4B	182.6
04/03/12	C27-11E	C27-11D	119.5
04/03/12	C27-11D	C27-11C	198.8
04/03/12	C27-11C	C27-11B	197.4
04/03/12	C27-7D*	C27-7D	227.1
04/03/12	C27-7F	C27-7E	168.5
04/03/12	C27-7E	C27-7D	150.7
04/03/12	C37D	C37C	202.6
04/03/12	C37C	C37B	200.6
04/03/12	C37E	C37B	204.4
04/03/12	C27-7B*	C27-7B	267.7
04/03/12	C27-14	C27-13	198.2
04/03/12	C27-13A	C27-13	198.5
04/03/12	D25-29E	D25-29D	242.5
04/03/12	D25-29F	D25-29D	21.8
04/03/12	D25-29D	D25-29C	275.3
04/03/12	D25-29B	D25-29A	189.7
04/03/12	D25-29A	D25-29	325.6
04/03/12	D25-27D	D29-27C	242.5
04/03/12	D25-27F	D25-27E	202.5
04/03/12	D25-27E	D25-27C	17.1
04/03/12	D25-27C	D25-27B	267.8
04/04/12	C17-14	C17-13	322.4
04/04/12	C17-12	C17-11	297.7
04/04/12	C17-10	C17-9	302.5
04/04/12	C17-8	C17-7	251.6
04/04/12	C17-2L	C17-2K	282.8

Date	MHFROM	MHTO	Footage
04/04/12	C17-2K	C17-2J	316.7
04/05/12	L7-14D	L7-14C	259.4
04/05/12	L7-14C	L7-14B	275.1
04/05/12	L7-14B	L7-14A	284.6
04/05/12		L7-16	359.7
04/05/12	L7-15	L7-14	44.3
04/05/12	L7-14A	L7-14	136.9
04/05/12	L7-14	L7-13	242.2
04/05/12	L7-13	L7-12	250.7
04/05/12	L7-11B	L7-11A	118.2
04/05/12	L7-11H	L7-11A	146
04/05/12	L7-11F	L7-11E	202.3
04/05/12	L7-11E	L7-11D	156.5
04/05/12	L7-9E	L7-9D	201
04/05/12	L7-9D	L7-9C	212.3
04/05/12	L7-6E	L7-6D	335.4
04/02/12	C17-2K	C17-2J	316.7
04/02/12	C17-2H	C17-2G	300
04/02/12	C17-7	C17-6	255.7
04/02/12	C17-2G	C17-2F	299
04/02/12	C17-2F	C17-2E	272
04/02/12	L7-6E	L7-6D	335.4
04/02/12	L7-7D	L7-6A	223.2
04/02/12	L7-6C	L7-6B	112.7
04/02/12	L7-6B	L7-6A	75.5
04/02/12	L7-6A	L7-6	253.8
04/02/12	L7-8	L7-7	292
04/04/12	L7-7	L7-6	300
04/04/12	L9-4J	L9-4H	248.6
04/04/12	L19-4I	L19-4H	142.8
04/04/12	L8-8	L8-7	332.7
04/04/12	L8-7	L8-6	111
04/04/12	L8-6	L8-5	255.8
04/04/12	L8-5	L8-4	115.5
04/09/12	L7-4B	L7-4L	47.7
04/09/12	L7-4A	L7-4	130.4
04/09/12	L7-6	L7-5	365
04/09/12	L7-5	L7-4	154
04/09/12	L9-4H	L9-4	79.6
04/09/12	L9-4B	L9-4A	391.3
04/09/12	L9-4A	L9-4	255.8
04/09/12	L7-12	L7-11	410
04/09/12	L7-11A	L7-11	263.9
04/09/12	L7-11D	L7-11C	136.4
04/09/12	L7-11C	L7-11	165.5
04/09/12	C27-4B	C27-4A	430.6
04/09/12	C27-7H	C27-7G	102.5
04/09/12	C27-7G	C27-7C	212.6
04/09/12	C27-7B	C27-7A	189.2
04/09/12	C27-36A	C27-36	173.9
04/10/12	L9-4G	L9-4F	201.6
04/10/12	L9-4F	L9-4E	208
04/10/12	L9-4E	L9-4D	193.3
04/10/12	L7-11G	L9-4D	178.9
04/10/12	L9-4D	L9-4C	251.5

Date	MHFROM	MHTO	Footage
04/10/12	L9-4C	L9-4B	255.4
04/10/12	L9-4K	L9-4B	294.4
04/10/12	L9-4B	L9-4A	391.3
04/10/12	L9-5F	L9-5E	231.5
04/10/12	L9-5E	L9-5D	227.8
04/10/12	L9-5D	L9-5C	242.6
04/10/12	L9-5C	L9-5B	259.7
04/10/12	L9-5B	L9-5A	240.7
04/10/12	L9-5A	L9-5	400.1
04/10/12	H13-4	H13-3	210.2
04/10/12	H13-3	H13-2	185.8
04/10/12	H13-2	H13-1	209.3
04/10/12	H12	H11	73.5
04/10/12	H13	H12	194.8
04/10/12	H14	H13	247.1
04/10/12	H15	H14	246.9
04/10/12	H15D	H15C	186.1
04/10/12	H15C	H15B	196.5
04/10/12	H15F	H15E	120.1
04/10/12	H15E	H15A	162.9
04/10/12	H17	H16	276.5
04/10/12	H16A	H16	194.8
04/10/12	B10-19	B10-18	239.2
04/10/12	H17-1	H17	234.6
04/11/12	B36L	B36K	174.5
04/11/12	B38-6B	B38-6A	49
04/11/12	B38-6A	B38-6	278.8
04/11/12	B38-6	B38-5	173.6
04/11/12	B38-5	B38-4	176.6
04/11/12	B38-6A	B36L	179.4
04/11/12	B36L	B36K	174.5
04/11/12	B36K	B36J	181.1
04/11/12	B36E-1	B36E	103.4
04/11/12	B36H	B36G	91
04/11/12	B36G	B36F	183
04/11/12	B36F	B36E	167.9
04/11/12	B35E	B35D	349.5
04/11/12	L9-12	L9-11	301.1
04/11/12	L9-11	L9-10	315.6
04/11/12	L9-10	L9-9	309.4
04/11/12	L9-9	L9-8A	202.2
04/11/12	L9-13	L9-12A	333
04/11/12	L22	L21	294.7
04/11/12	L21	L20	139.8
04/11/12	L20	L19	214.6
04/11/12	L9-7D	L9-7C	189.8
04/11/12	L9-7C	L9-7B	253.7
04/11/12	L19	L18	214.9
04/11/12	61-14	61-13	221.1
04/11/12	61-13	61-12	254.4
04/11/12	76-3H	76-3G	245.8
04/11/12	76-3G	76-3F	261
04/11/12	61-12	61-11	317.4
04/11/12	61-11	61-10	312.1
04/11/12	F21-9	F21-8	272.3

Date	MHFROM	MHTO	Footage
04/11/12	F21-8	F21-7	204.1
04/11/12	F29	F28	202.5
04/11/12	F28	F27	192.6
04/11/12	F27	F26	210.3
04/11/12	F26	F25	238.4
04/11/12	76-2D	76-2C	188.4
04/11/12	76-2C	76-2B	201.1
04/11/12	76-2B	76-2A	250.9
04/11/12	76-2A	A79	249.8
04/13/12	F15-5D	F15-5C	215.1
04/13/12	C27-34C	C27-34	185.7
04/13/12	C27-35	C27-34	270.4
04/13/12	F15-5A	F15-5	342.3
04/13/12	F15-5C	F15-5A	246.2
04/16/12	L16C	L16B	267.3
04/16/12	L16B	L16A	299.5
04/16/12	L9-7B	L9-7A	299.8
04/16/12	K2-13	K2-12	149.9
04/16/12	K2-12	K2-11	218.6
04/16/12	K2-11	K2-10	184.9
04/16/12	K2-8A	K2-8	330.2
04/16/12	K12-7C	K12-7B	157.4
04/16/12	K12-7B	K12-7A	46.6
04/16/12	K12-7A	K12-7	252.6
04/16/12	K12-2G1	K12-2	354.8
04/16/12	T15	T14	299.3
04/16/12	T14	T13	170.6
04/18/12	C27-31H	C27-31G	259
04/18/12	D25-12B	D25-12A	235.9
04/18/12	D25-12A	D25-12	98
04/18/12	D25-13	D25-12	199
04/18/12	D25-15N	D25-15E	278.4
04/19/12	L9-7A	L9-7	298.6
04/19/12	L9-8A	L9-8	223
04/19/12	L9-8	L9-7	39.7
04/19/12	K40-1	K40	360.5
04/19/12	C40-8	C40-7	297.2
04/19/12	C40-5	C40-4	282.4
04/19/12	K12-14T	K12-14S	321.7
04/19/12	K12-14S	K12-14R	298.7
04/19/12	K12-14R	K12-14	35.6
04/19/12	K12-14A	K12-14	295
04/19/12	K2-9-15A	K2-9-15	54
04/19/12	D25-14B	D25-14A	232.4
04/19/12	D25-14C	D25-14A	227
04/19/12	D25-14	D25-14A	270
04/19/12	D25-11B	D25-11A	214.5
04/19/12	D25-11A	D25-11	288.9
04/19/12	D25-15C	D25-15B	242.1
04/19/12	D25-15B	D25-15S	294.9
04/19/12	D25-15D	D25-15K	279.6
04/19/12	D25-15E	D25-15N	278.4
04/19/12	D25-10D	D25-10B	122.9
04/19/12	D25-10B	D25-10A	142.3
04/19/12	D25-10E	D25-10A	129.3

Date	MHFROM	MHTO	Footage
04/20/12	C13-28A	C13-28	300
04/20/12	C15-11E	C15-11D	255
04/20/12	L7-17	L7-16	282.6
04/20/12	L7-16	L7-15	359.7
04/20/12	L7-6F	L7-6	298.3
04/20/12	L9-4I	L9-4H	142.8
04/20/12	L9-4	L9-3	382.6
04/25/12	59-2F	59-2B	174.8
04/25/12	59-2B	59-2A	307.5
04/25/12	59-3	59-2	323.5
04/25/12	59-2A	59-2	23.9
04/25/12	59-2E	59-2C	80.9
04/25/12	59-2D	59-2C	110
04/25/12	59-2C	59-2B	111.1
04/25/12	59-2	59-1	299.3
04/25/12	61-2	61-1	229.3
04/25/12	61-1	A61	126.6
04/25/12	F5-8	F5-7	279.1
04/25/12	F5-7	F5-6	199.9
04/25/12	F5-4	F5-3	361.5
04/25/12	F5-3	F5-2	298.4
04/25/12	F5-6	F5-5	208.1
04/25/12	F5-5	F5-4	199.4
04/25/12	F5-1C	F5-1B	161.3
04/25/12	F5-1B	F5-1A	19.8
04/25/12	F5-1A	F5-1	299.8
04/26/12	F6F	F6E	270.1
04/26/12	F6E	F6D	72.8
04/26/12	F6D	F6C	150.9
04/26/12	F6C	F6B	18.8
04/26/12	F6B	F6	47.4
04/26/12	F6A	F6	105.9
04/26/12	F8	F7	145.9
04/26/12	F7	F6	254.9
04/26/12	F1-1B	F1-1A	256
04/26/12	F1-1A	F1-1	242.1
04/26/12	F1-2	F1-1	176.4
04/26/12	F5	F4	220.1
04/26/12	F4A	F4	50.9
04/26/12	F4A	F3	145.5
04/26/12	F3	F2	84.9
04/26/12	42C	42B	340.3
04/26/12	F5-1	F5	273.2
04/26/12	F5A	F5	209.2
04/26/12	F6	F5	219.8
04/26/12	43-6	43-5	317.7
04/26/12	43-5	43-4	322.9
04/26/12	43-4	43-3	320
04/26/12	C15-4	C15-3	314.9
04/26/12	C15-3	C15-2	302.1
04/26/12	C13-E	C13-B	218.5
04/26/12	C13-D	C13C	137.7
04/26/12	C13C	C13B	31.8
04/26/12	C13F	C13B	257.9
04/26/12	C13B	C13A	266.3

Date	MHFROM	MHTO	Footage
04/26/12	C13G	C13A	232.7
04/26/12	C13A	J-C15	222.1
04/26/12	J-C16	C14	68
04/26/12	C14	J-C15	137.2
04/26/12	C17H	C17E	401.7
04/26/12	C20-3E	C17E	260.7
04/26/12	C13-1	C13-A	111.7
04/26/12	C13-A	J-C14	38
04/26/12	C17E	C17C	247.6
04/26/12	C17C	C17D	176.6
04/26/12	C17L	C17K	405.4
04/27/12	F2	F1	283.5
04/27/12	F1-1	F1	244.4
04/27/12	43-3	43-2	350.1
04/27/12	43-2	43-1	353.6
04/27/12	40E	40D	344.2
04/27/12	C37	C36	160.9
04/27/12	C36	C35	184
04/27/12	42B	42A	199.9
04/27/12	42A	42	140.6
04/27/12	42D	42	237.4
04/27/12	40E	40D	344.2
04/27/12	C37	C36	160.9
04/27/12	C36	C35	184
04/27/12	K2-5-7	K2-5-6	233.1
04/29/12	F21-7	F21-6	205.6
04/29/12	F21-6	F21-5	205.1
04/30/12	K2-9-3E	K2-9-3D	162.8
04/30/12	K2-9-3D	K2-9-3C	224.5
04/30/12	K2-9-3C	K2-9-3	107.1
04/30/12	K2-9-5	K2-9-4-1	250.6
04/30/12	K2-9-4-1	K2-9-4	19
04/30/12	K2-9-4	K2-9-3	43.3
04/30/12	K2-9-6A	K2-9-6	445.2
04/30/12	K2-9-8	K2-9-7	85.4
04/30/12	K2-9-7	K2-9-6	36.7
04/30/12	D25-21G	D25-21F	230.3
04/30/12	K2-9-5B	K2-9-5A	112.3
04/30/12	K2-9-5A	K2-9-5	300.6
05/01/12	55-5B	55-5A	296
05/01/12	D25-4B	D25-4A	256.9
05/01/12	D25-5B	D25-5A	148.1
05/01/12	D25-5E	D25-5A	154
05/01/12	D25-4A	D25-4	279
05/01/12	D25-5	D25-4	314.5
05/01/12	D27C	D27B	249.8
05/01/12	D25-17A	D25-17	262.3
05/01/12	D25-6E	D25-6D	245.7
05/01/12	D25-17	D25-16	260.8
05/01/12	D25-16	D25-15-1	264.6
05/01/12	D25-15-1	D25-15	32.9
05/02/12	D25-31F	D25-31D	38.7
05/02/12	D25-31F	D25-31D	152.4
05/02/12	D25-31D	D25-31B	262.7
05/02/12	D25-31C	D25-31B	137.1

Date	MHFROM	MHTO	Footage
05/02/12	D25-12	D25-11	211.8
05/02/12	D25-31G	D25-31A	255.9
05/02/12	D25-31B	D25-31A	170.2
05/02/12	D25-15	D25-14	257.9
05/02/12	D25-14A	D25-14	270.6
05/02/12	D25-14	D25-7	282.4
05/02/12	C17K	C17J	389.4
05/02/12	D25-15-0	D25-15S	224.3
05/02/12	D25-15S	D25-15B	294.9
05/02/12	D25-15F	D25-15E	278.4
05/02/12	D25-15K	D25-15D	279.6
05/02/12	C17B	C17A	161
05/02/12	C17A	J-C17B	96.8
05/02/12	C19	C18	250
05/02/12	C-18	J-C17B	37.3
05/02/12	J-C17A	C-17-1	53.4
05/02/12	C17-1	C17-2	210.7
05/03/12	D25-6G	D25-6F	252.7
05/03/12	D25-6B	D25-6A	284.9
05/03/12	D25-6A	D25-6	270.9
05/03/12	D25-8	D25-7	266.3
05/03/12	D25-7	D25-6	39.8
05/03/12	D25-19A	D25-19	276.1
05/03/12	D25-15Q	D25-15P	224.3
05/03/12	D25-15P	D25-15B	294.9
05/03/12	D25-15K	D25-15D	279.6
05/03/12	D25-15F	D25-15E	278.4
05/03/12	F10	F11	235.8
05/03/12	F11	F12	274
05/03/12	F14	F13	150.6
05/03/12	F13	F12	180.7
05/03/12	F12-1A	F12-1F	216
05/03/12	F15	F14	415
05/04/12	55-4B	55-4A	213.5
05/04/12	55-4A	55-4	158.1
05/04/12	55-4	55-3	128.8
05/04/12	55-3	55-2	123
05/04/12	55-2	55-1	42.4
05/04/12	76-3E	76-3D	200
05/04/12	76-3D-1	76-3D	81
05/04/12	61-4B	61-4A	333.1
05/08/12	H5	H4B	119.4
05/08/12	H4B	H4B	123.4
05/09/12	H13	H12	194.8
05/09/12	H12	H11	73.5
05/09/12	H11	H10	248.6
05/09/12	H10	H9	265.8
05/09/12	H9B	H9A	203.6
05/09/12	H9A	H9	202.1
05/09/12	H8B	H8A	118.8
05/09/12	H8A	H8	191.9
05/09/12	H8C	H8	387
05/09/12	H9	H8	243.4
05/09/12	H8	H7	250
05/09/12	H7	H6	118.8
05/09/12	H6	H5	161.1
05/09/12	H5	H4B	119.7
05/09/12	H4B	H4	123.4
05/09/12	H4	H3	176.5
05/09/12	H3	H2	200.2
05/09/12	H2	H1	261.2
05/09/12	H2A	H2	251.1
05/09/12	H1	B30A	284.3
05/10/12	D9-22I	D9-22H	66.7
05/10/12	D9-22H	D9-22G	189
05/10/12	D9-22G	D9-22F	222
05/10/12	D9-22-F	D9-22E	286.5
05/10/12	D9-31	D9-30	202.9
05/10/12	D9-30	D9-29	41.5
05/10/12	D9-29	D9-28	203.3
05/10/12	D9-28	D9-27	40.4
05/10/12	D9-22-3	D9-22-2	170.6
05/10/12	D9-22-2	D9-22-1	204.6
05/10/12	D9-22-1	D9-22	85.4
05/10/12	D9-23	D9-22	264.8
05/10/12	D9-22B	D9-22A	243.9
05/10/12	D9-22	D9-21	260.8
05/10/12	D9-21	D9-20	83.4
05/10/12	D9-20	D9-19	396.6
05/10/12	D9-19	D9-18	33.1
05/10/12	D9-18	D9-17	267.2
05/20/12	B35B	B35A	60.8
05/21/12	B35C	B35B	202.8
05/21/12	B35B	B35A	67.3
05/21/12	B36B	B36A	60.8
05/21/12	B38-3	B38-2	287.5
05/21/12	B38-2	B38-1	77.3
05/22/12	30-4C	30-4B	162.8
05/22/12	30-4B	30-4A	292.5
05/22/12	30-4A	30-4	226.2
05/22/12	30-4	30-3	276.6
05/22/12	F15-7-3	F15-7-2	146.8
05/22/12	F15-7-8A	F15-7-2	324.5
05/22/12	F15-7-2	F15-7-1	123.8
05/23/12	F15-5A	F15-5	342.3
05/24/12	H35I	H35G	125.3
05/24/12	H35G	H35F	95.9
05/24/12	IP3-4	H35F	108.5
05/24/12	H35T	H35S	351.7
05/24/12	H35S	H35E	348.3
05/24/12	H35F	H35E	308.7
05/24/12	C15-11I	C15-11A	183.9
05/24/12	L9-6	L9-5	262
05/24/12	L9-5	L9-4	255.6
05/24/12	61-2B	61-2A	159.7
05/24/12	61-2C	61-2A	95
05/24/12	61-6A	61-6	165.8
05/24/12	K12-141-1	K12-141	215.9
05/24/12	K12-14D5	K12-14D4	130.3
05/24/12	K12-14D4	K12-14D3	38.7

Date	MHFROM	MHTO	Footage
05/24/12	K12-14D3	K12-14D1	276
05/24/12	K12-14D2	K12-14D1	156.4
05/24/12	C8-6F	C8-6C	126.7
05/24/12	C8-6C	C8-6B	284.3
05/24/12	C8-6B	C8-6A	108.5
05/24/12	C8-6	C8-5	51
05/24/12	C8-5	C8-4	138
05/25/12	C8-6I	C8-6A	285.1
05/25/12	C8-6A	C8-6	123.6
05/25/12	C8-5A	C8-5	130.8
05/25/12	C8-8	C8-7	229
05/25/12	C15-9-6	C15-9-3	217.5
05/25/12	C15-9-3	C15-9-2	94.9
05/25/12	D9-17	D9-16	246
05/29/12	H25A	B10-27	248.5
05/29/12	H13-11	H13-10	249.3
05/29/12	H13-10	H13-9	208.7
05/29/12	H28A	B10-31	216.3
05/29/12	H27A	H27	200.4
05/29/12	B10-31	B10-30	31
05/30/12	30B	30A	197.3
05/30/12	30A	A23	271
05/30/12	30-1A	A23	155.6
05/30/12	B14A	B14	255.2
05/30/12	B14D	B14A	140.1
05/30/12	30-2H	30-2G	246.9
05/30/12	27-1D-1	27-1D	77.5
05/30/12	27-1D	27-1B	141.4
05/30/12	27-1C	27-1B	48
05/30/12	27-1B-1	27-1B	53
05/30/12	27-1B	27-1A	183.1
05/30/12	27-1A	27-1	250.5
05/30/12	B15C	B15B	142.3
05/30/12	B29B	B29A	105.4
05/30/12	B29A	B29	257.3
05/30/12	B30-1C	B30-1	246.9
05/31/12	B38-8	WR60-11	199.6
05/31/12	B38-7A	WR60-11	272.5
05/31/12	B38-7F	WR60-11	210.1
05/31/12	F12-1F	F12-1A	216.4
05/31/12	F12-1	F12	330.9
05/31/12	F14C	F14B	183.4
05/31/12	F14B	F14A	194.5
05/31/12	F14A	F14	275.4
05/31/12	F18	F17	315.8
05/31/12	L15A	L15	297.9
05/31/12	L16	L15	266.2
05/31/12	L12-1	L12	299.6
05/31/12	L13	L12	235.1
05/31/12	D9-14A	D9-14	544
05/31/12	D9-15	D9-14	222.23
06/04/12	C15-11A	C15-11	265.6
06/04/12	F15-11	F15-12	336.1
06/04/12	76-12	76-11	220.8
06/04/12	76-11	76-10	100.9

Date	MHFROM	MHTO	Footage
06/04/12	76-9A	76-9	374.3
06/04/12	76-10	76-9	334.8
06/04/12	76-7A	76-7	301.4
06/04/12	76-9	76-8	263
06/04/12	76-8	76-7	222
06/04/12	76-6B	76-6A	325.2
06/04/12	76-6A	76-6	299.9
06/07/12	A81	76-3	280.9
06/07/12	76-6	76-5	267.1
06/07/12	76-5	76-4	254.3
06/07/12	76-4	76-3	284.5
06/07/12	76-2G	A79	263.8
06/07/12	76-3	A79	273.4
06/07/12	45-7F	45-7E	225.5
06/07/12	43-11	43-10	303.9
06/07/12	43-10	43-9	218.8
06/07/12	43-9	43-8	199.3
06/07/12	43-8	43-7	20.8
06/04/12	76-7C	76-7B	341.3
06/04/12	76-7B	76-7A	299.3
06/04/12	45-7A	45-7G	234.8
06/04/12	45-7G	45-7F	215.7
06/11/12	F12	F11	274
06/11/12	F11	F10	235.8
06/11/12	F10	F9	38.5
06/11/12	F9	F8	34
06/11/12	F5-2	F5-1	299.8
06/11/12	40D	40C	341.9
06/11/12	K40-3	K40-2	184.5
06/11/12	K40-2	K40-1	359.5
06/11/12	B35-5H	B35-5G	214.6
06/11/12	B35-5C	B35-5B	204.5
06/11/12	B35-5G	B35-5F	234.7
06/11/12	B35-5F	B35-5B	227.9
06/11/12	B35-5A-1	B35-5A	246.7
06/11/12	B35-5A	B35-5	253.1
06/11/12	B35-5	B35-4	144.2
06/11/12	B35-6	B33-5	315.8
06/11/12	B35-5J	B35-5I	228
06/11/12	F17-1	F17	315.8
06/13/12	K12-141-1	K12-141	215.9
06/13/12	B35-4G	B35-4E	70.9
06/13/12	B35-4F	B35-4E	204.5
06/13/12	B35-4E	B35-4D	321.2
06/13/12	B35-4D	B35-4C	60.1
06/13/12	B35-4C	B35-4B	334
06/13/12	B35-4B	B35-4A	340.8
06/13/12	B35-4A	B35-4	340.6
06/14/12	D9-13B	D9-13A	383.8
06/14/12	C17M	C17L	390.7
06/14/12	D9-23E	D9-23D	318.9
06/14/12	D9-25B	D9-25A	399
06/14/12	D9-23B	D9-23A	220.2
06/14/12	D9-23C	D9-23A	291.5
06/14/12	D9-23D	D9-23C	242.4

Date	MHFROM	MHTO	Footage
06/14/12	D9-12A	D9-12	298.7
06/14/12	D9-12A	D9-12	298.7
06/14/12	D9-23C-1	D9-23C	213.2
06/14/12	C17-I	C17-H	248.8
06/14/12	D9-12B	D9-12A	286.7
06/14/12	D9-13B	D9-13A	383.8
06/14/12	D9-14	D9-13	267.3
06/14/12	D9-13A	D9-13	199.5
06/14/12	D9-27C	D9-27B	263.5
06/14/12	D9-27B	D9-27A	240
06/14/12	D24-7B	D24-7A	158.7
06/14/12	D9-25D	D9-25C	241
06/14/12	D9-25C	D9-25B	231.3
06/15/12	D24-8	D24-7	234.1
06/15/12	D24-6	D24-5	251.8
06/15/12	F15-5A	F15-5	342.8
06/15/12	D9-11	D9-10	268.5
06/15/12	D9-10	D9-9	110.5
06/15/12	D9-13	D9-12	27.5
06/15/12	D9-12	D9-11	261.8
06/15/12	D9-25A	D9-25	251.5
06/15/12	D9-27	D9-26	273.8
06/15/12	D9-26	D9-25	25.5
06/15/12	D9-23A	D9-23	289.5
06/15/12	D9-24	D9-23	263.2
06/15/12	D9-22F	D9-22E	286.5
06/15/12	D9-22E	D9-22D	52.8
06/15/12	D9-22D	D9-22C	202.8
06/15/12	D9-22C	D9-22B	62.6
06/18/12	A79	A78	254.8
06/18/12	A78	A77	12
06/18/12	A77	A75	275.4
06/22/12	L7-9A	L7-9	247.1
06/22/12	L7-9C	L7-9	296.1
06/22/12	L7-11	L7-10	273.9
06/22/12	L7-10	L7-9	208.1
06/22/12	L7-9	L7-8	64.9
06/22/12	L7-11D	L7-11G	165.5
06/22/12	L9-3	L9-2	374.5
06/25/12	D25-27A	D25-27	110.5
06/25/12	D25-23-3	D25-25-2	27.4
06/25/12	D25-25-2	D25-25	173.2
06/25/12	D25-25-2	D25-2	293.3
06/25/12	D24-4B	D24-4A	148.4
06/25/12	D24-4-1	D24-4A	149.9
06/25/12	D24-4C	D24-4B	186.6
06/25/12	D24-2A	D24-2	221.9
06/25/12	D24-2B	D24-2	231.3
06/25/12	D24-4D	D24-4C	124.2
06/25/12	D24-5	D24-4-1	213.2
06/26/12	D24-4A	D24-4	27
06/26/12	D24-4	D24-3	279
06/26/12	D24-3	D24-2	164.5
06/26/12	D24-1A	D24-1	103.7
06/26/12	D24-2	D24-1	277.3

Date	MHFROM	MHTO	Footage
06/26/12	D9-2B	D9-2A	267.4
06/26/12	D9-2C	D9-2A	220.8
06/26/12	D9-2A	D9-2	242.2
06/26/12	D9-1	D9	230.5
06/26/12	D9-16	D9	37
06/28/12	46A-1	46A	128
06/28/12	46A	46	221
06/28/12	46C	46B	131.5
06/28/12	46B	46	33.8
06/28/12	46-2	46-1	324.33
06/28/12	46-1	46	32
06/28/12	D11	D10	294.5
06/28/12	D10A	D10	249.1
06/28/12	40C	40B	259.3
06/28/12	F1	A31	304.1
06/27/12	D18-6	D18-5	241.6
06/27/12	D18-5	D18-4	290.8
06/27/12	D18-4B	D18-4A	149.7
06/27/12	D18-4A	D18-4	251.5
06/27/12	D18-3B	D18-3A	118.1
06/27/12	D18-3A	D18-3	279.8
06/27/12	D18-2A	D18-2	284.9
06/27/12	D18-3	D18-2	228.1
06/27/12	D18-1C	D18-1B	224.3
06/27/12	D18-1B	D18-1	292.1
06/27/12	D18-2	D18-1	292.1
06/27/12	D18-1A	D18-1	253.6
06/27/12	D21C	D21A	151.9
06/27/12	D21A	D21	260.4
06/27/12	D20B	D20A	376.6
06/27/12	D18-1	D18	287.1
07/02/12	D17B	D17A	144.7
07/05/12	C20-3B	C20-3A	172.4
07/05/12	C20-3A	C20-3	362.1
07/05/12	C20-3	C20-2	321.6
07/05/12	C20-2	C20-1	94
07/05/12	C17-F	C17-E	260
07/05/12	C20-5A	C20-5	120.4
07/05/12	C20-6	C20-5	116.5
07/06/12	B10-34	B10-33	150.3
07/06/12	B10-33	B10-31	106.8
07/06/12	H26-5	H26-4	119.6
07/06/12	H26-4	H26-3	125.6
07/06/12	H26-3	H26-2	181.1
07/06/12	H26-2	H26-1	8.7
07/06/12	H25A	H25	248.5
07/06/12	H13-18C	H13-18A	218.8
07/09/12	H28E	H28D	207.2
07/09/12	H28D	H28C	216.5
07/09/12	H28C	H28B	299
07/09/12	H28B	H28A	109.5
07/10/12	K40-1	K40	360.5
07/10/12	F18-16	F18-15	234.2
07/10/12	H20-6	H20-5	200.2
07/10/12	H20-5	H20-4	229.5

Date	MHFROM	MHTO	Footage
07/10/12	H20-3B	H20-3A	248.6
07/12/12	C27-7D	C27-7C	390.9
07/12/12	D9-12B	D9-12A	286.7
07/13/12	D27C	D27B	249.8
07/16/12	C27-17	C27-16	214
07/16/12	C27-16	C27-15	218.3
07/16/12	K40-2D	K40-2C	288.4
07/16/12	K40-2C	K40-2	302.2
07/16/12	K40-2A	K40-2	245.6
07/17/12	K40-3B	K40-3A	215.4
07/17/12	K40-3A	K40-3	250.3
07/17/12	K40-6	K40-5	175
07/17/12	K40-5	K40-4	134.2
07/17/12	K40-4	K40-3	248.5
07/17/12	K36G	K36F	240.3
07/17/12	K36F	K36E	195.6
07/17/12	K36E	K36D	195.5
07/17/12	K42	K41	316.5
07/17/12	K40-7	K40-6	243.2
07/16/12	K51	K50	79.6
07/16/12	K50	K49	227
07/16/12	K49	K48	224.4
07/16/12	K47C	K47B	152.7
07/16/12	K47B	K47A	231.4
07/16/12	K47A	K47	292.4
07/16/12	K48	K47	168.2
07/16/12	K45B	K45A	77.3
07/16/12	K45A	K45	222.1
07/16/12	K46	K45	351.2
07/16/12	K47	K46	63.1
07/18/12	K41	K40	270.9
07/18/12	K40B	K40A	118.1
07/18/12	K40A	K40	146.2
07/18/12	K40	K39	78
07/18/12	K39	K38	92.3
07/18/12	K38	K37	181.7
07/18/12	K37	K36	185.3
07/18/12	K36D	K36C	219.2
07/18/12	K36C	K36	215.9
07/18/12	K36B	K36A	231.5
07/18/12	K36A	K36	230.3
07/18/12	K36	K35	184.2
07/18/12	K35	K34	179.6
07/18/12	K34D	K34C	190.8
07/18/12	K34C	K34	188.8
07/18/12	K43A	K43	349.8
07/18/12	K45	K44	246.3
07/18/12	K44	K43	236.1
07/18/12	K12-14O	K12-14N	210.2
07/18/12	K12-14N	K12-14M	180
07/18/12	K12-14M	K12-14L	28.5
07/18/12	K43	K42	249.9
07/18/12	K42	K42A	71.9
07/19/12	C55	C54	214.6
07/19/12	C54	C53	214.7
07/19/12	C53	C51B	223.2
07/19/12	C51B	C51	88.4
07/19/12	C51A	C51	284.5
07/19/12	C51	C50	309.3
07/19/12	C50A	C50	341
07/19/12	C50	C49	179.2
07/19/12	C49	C48	156.4
07/19/12	C48	C47	144.7
07/19/12	C47C	C47B	19.6
07/19/12	C47B	C47A	170.5
07/19/12	C47A	C47	189.6
07/19/12	C47	C46-1	93.4
07/19/12	C46-1	C46	130.5
07/19/12	C46A	C46	223.2
07/19/12	C45B	C45A	240.3
07/19/12	C45C	C45A	211.9
07/19/12	C40-17	C40-16	135.6
07/19/12	C40-16	C40-15	148.8
07/19/12	C40-15	C40-14	200.5
07/19/12	C40-14A	C40-14	120
07/19/12	C40-12B	C40-12A	113
07/19/12	C40-12A	C40-12	176
07/19/12	C40-12	C40-11	329.8
07/19/12	C40-11	C40-10	237.9
07/19/12	C40-10	C40-9	237.8
07/19/12	C40-9	C40-8	299.5
07/19/12	C40-7	C40-6	266.8
07/19/12	C40-6	C40-5	260.5
07/19/12	C40-5A	C40-5	235.8
07/20/12	C40-2A	C40-2	244
07/20/12	C40-4	C40-3	230.3
07/20/12	C40-3	C40-2	32.2
07/20/12	C40-2	C40-1	271.4
07/20/12	C40-1	C40	266.2
07/20/12	C45A	C45	263.5
07/20/12	C46	C45	336.3
07/20/12	C42D	C42C	79.9
07/20/12	C42C	C42B	230.8
07/20/12	C42B	C42A	157.2
07/20/12	C42E	C42A	211.6
07/20/12	C45	C44	159.73
07/20/12	C44	C43	230.7
07/20/12	C43	C42	159.4
07/20/12	C42A	C42	262.2
07/20/12	C42	C41	210.1
07/20/12	C41	C40	317.3
07/23/12	C38-7	C38-6	222
07/23/12	C38-6	C38-5	108.7
07/23/12	C38-5	C38-4	179.7
07/23/12	C38-4A	C38-4	165
07/23/12	C38-3B	C38-3A	238
07/23/12	C38-3A	C38-3	233.7
07/23/12	C38-2E	C38-2D	226.3
07/23/12	C38-2D	C38-2	440.9
07/23/12	C38-2C	C38-2A	94.2

Date	MHFROM	MHTO	Footage
07/23/12	C38-2B	C38-2A	84.3
07/23/12	C38-2A	C38-2	184.3
07/23/12	C38-4	C38-3	111.5
07/23/12	C38-3	C38-2	278.5
07/23/12	C35D	C35C	177.8
07/23/12	C35C	C35B-1	116.4
07/23/12	C35B-1	C35B	58.8
07/23/12	C35B	C35A	129.9
07/23/12	C38-2	C38-1	251.2
07/23/12	C38-1	C38	279.2
07/23/12	C40	C39	209.3
07/23/12	C39	C38	173.1
07/23/12	C38	C37-2	186.8
07/23/12	C37-2	C37-1	38.7
07/23/12	C37-1	C37	79.8
07/23/12	D25-33C	D25-33A	388.4
07/23/12	D25-33B	D25-33A	229.9
07/23/12	D25-33A	D25-33	257.3
07/23/12	C27-38	C27-37	229.9
07/23/12	C27-37A	C27-37	245.1
07/23/12	C27-37	C27-36	251.1
07/23/12	C27-36A	C27-36	173.9
07/23/12	C27-36B	C27-36	266.2
07/23/12	C27-36	C27-35	294.1
07/23/12	C27-35A	C27-35	256.5
07/23/12	C27-35	C27-34	270.4
07/23/12	C27-34B	C27-34A	262.3
07/23/12	C27-34A	C27-34	277.7
07/23/12	C27-34C	C27-34	185.7
07/23/12	C27-31F	C27-31E	139.5
07/23/12	C27-31E	C27-31D	246.7
07/24/12	D25-35A	D25-35	268.4
07/24/12	D25-36	D25-35	293.1
07/24/12	D25-34A	D25-34	275.4
07/24/12	D25-35	D25-34	265.6
07/24/12	D25-34	D25-33	274.1
07/24/12	C37-31D	C27-31B	239.5
07/24/12	C27-31C	C27-31B	345.3
07/24/12	C27-31B	C27-31A	234.7
07/24/12	C27-31I	C27-31H	291.2
07/24/12	C27-31H	C27-31G	259
07/24/12	C27-31G	C27-31A	261.7
07/24/12	C27-34	C27-33	247.6
07/24/12	C27-33	C27-32-1	252.2
07/24/12	C27-23-1	C27-32	8.3
07/25/12	K2-6C	K2-6B	232.2
07/25/12	K2-6B	K2-6A	218.6
07/25/12	K12-9E	K12-9D	511.4
07/25/12	K2-5F	K2-5B	388.7
07/25/12	K2-5E	K2-5B	299
07/25/12	K2-5D	K2-5C	121.3
07/25/12	K2-5C	K2-5B	148.6
07/25/12	C20-3D	C20-3C	325.8
07/25/12	C20-3C	C20-3B	299.9
07/25/12	C20-3F	C20-3E	283.8

Date	MHFROM	MHTO	Footage
07/25/12	C20-3E	C20-3B	267.1
07/25/12	C20-6G	C20-6F	164.2
07/25/12	C20-6F	C20-6D	300.6
07/25/12	C20-6E	C20-6D	198.2
07/25/12	C20-6D	C20-6C	126.9
07/25/12	C20-6C	C20-6B	268.8
07/25/12	C20-6B	C20-6A	176.9
07/25/12	K12-18A	K12-18	390.1
07/25/12	K12-19	K12-18	93.9
07/25/12	K12-18	K12-17	383
07/25/12	K12-17D	K12-17C	275.9
07/25/12	K12-17C	K12-17	244.3
07/25/12	K12-17B	K12-17A	207.7
07/25/12	K12-17A	K12-17	135.4
07/25/12	K12-16B	K12-16A	147.8
07/25/12	K12-16A	K12-16	300.6
07/25/12	K12-17	K12-16	353
07/25/12	K12-16D	K12-16C	233.9
07/25/12	K12-16C	K12-16	252.4
07/25/12	K12-16	K12-15	274.4
07/25/12	K12-15B	K12-15A	98.3
07/25/12	K12-15A	K12-15	308.2
07/25/12	K12-15	K12-14	263
07/26/12	K2-5H	K2-5G	194.9
07/26/12	K2-5G	K2-5A	205
07/26/12	K2-5B	K2-5A	268.8
07/26/12	K12-2I	K12-2H	385
07/26/12	K12-2H	K12-2G	371.3
07/27/12	K8-7	K8-6	177.2
07/27/12	K8-6	K8-5	228
07/27/12	K8-5	K8-4	358.2
07/27/12	K8-3B	K8-3A	237.9
07/27/12	K12-2E	K12-2D	265.9
07/27/12	K12-2F	K12-2D	345.7
07/27/12	K12-2D	K12-2C	227.8
07/27/12	K12-2C	K12-2A	224.6
07/27/12	K12-2B	K12-2A	222.3
07/27/12	K12-2A	K12-2	359
08/01/12	K12-12D1	K12-12D	61
08/01/12	K12-12D	K12-12C	321.8
08/01/12	K12-12C	K12-12B	26
08/01/12	K12-12B	K12-12A	295.9
08/01/12	K12-12A	K12-12	299.5
08/01/12	K12-7I	K12-7H	289.3
08/01/12	K12-7H	K12-7G	218.8
08/01/12	K12-G	K12-7F	227.6
08/01/12	K12-7F	K12-7E	204.4
08/01/12	K12-7E	K12-7D	109.1
08/01/12	K12-7K	K12-7J	183.5
08/01/12	K12-7J	K12-7D	183.6
08/01/12	K12-7D	K12-7	172.8
08/01/12	K12-11G	K12-11F	200.7
08/01/12	K12-11F	K12-11E	117.2
08/01/12	K12-11E	K12-11C	219.4
08/01/12	K12-11I	K12-11H	118.3

Date	MHFROM	MHTO	Footage
08/01/12	K12-11H	K12-11D	261.9
08/01/12	K12-11D	K12-11C	45
08/01/12	K12-11C	K12-11	245.3
08/01/12	K12-9K	K12-9J	65.4
08/01/12	K12-9H	K12-9G	406.9
08/01/12	K12-9I	K12-9G	209.9
08/01/12	K12-9G	K12-9F	104
08/03/12	K12-5F	K12-5E	374.9
08/03/12	K12-5E	K12-5D	63.7
08/03/12	K12-5D	K12-5C	213.3
08/03/12	K12-5C	K12-5B	29.9
08/03/12	K12-5B	K12-5	175.5
08/02/12	K12-5F	K12-5E	374.9
08/02/12	K12-5E	K12-5D	63.7
08/02/12	K12-5D	K12-5C	213.3
08/02/12	K12-5C	K12-5B	29.9
08/02/12	K12-5B	K12-5	175.5
08/02/12	K12-9F	K12-9C	21
08/02/12	K12-9C	K12-9B	158.9
08/02/12	K12-9B	K12-9A	253.4
08/02/12	K12-9J	K12-9A	277.5
08/03/12	C13-27C	C13-27B	161.3
08/03/12	C13-27B	C13-27A	186
08/03/12	C13-27A	C13-27	199.1
08/03/12	C13-28	C13-27	260.1
08/03/12	C13-33	C13-32	151.9
08/03/12	C13-32	C13-31	179.4
08/03/12	C13-31	C13-30	180.7
08/03/12	C13-30	C13-29	204.3
08/03/12	C13-29	C13-28	200.5
08/03/12	C13-28B	C13-28A	289.4
08/06/12	C13-4F	C13-4E	361.9
08/06/12	C13-4E	C13-4D	336
08/06/12	C13-4D	C13-4C	339.5
08/06/12	C13-4C	C13-4B	290.9
08/06/12	C13-4H	C13-4G	331.3
08/06/12	C13-4G	C13-4B	342.7
08/06/12	C13-4I	C13-4A	313.6
08/06/12	C13-4B	C13-4A	138.8
08/06/12	C13-4A	C13-4	441.7
08/06/12	C13-4	C13-3	334.8
08/06/12	C13-15	C13-14	355.2
08/06/12	C13-14	C13-13	359.6
08/06/12	C13-13	C13-12	364.7
08/06/12	C13-12	C13-11	348.2
08/06/12	C13-11	C13-10	382.3
08/06/12	C13-10	C13-9	93.6
08/06/12	C13-9A	C13-9	175.9
08/07/12	C17-3P	C17-3O	112.9
08/07/12	C17-3O	C17-3L	80.1
08/07/12	C13-3N	C13-3M	228.9
08/07/12	C17-3M	C13-3L	131.5
08/07/12	C17-3L	C17-3F	246.8
08/07/12	C17-3K	C17-3J	117.4
08/07/12	C17-3J	C17-3I	207.5

Date	MHFROM	MHTO	Footage
08/07/12	C17-3I	C17-3H	8
08/07/12	C17-3H	C17-3G	3
08/07/12	C17-3G	C17-3F	50
08/07/12	C17-3F	C17-3E	257.3
08/07/12	C17-3E1	C17-3E	259.7
08/07/12	C17-3E	C17-3D	182.4
08/07/12	C13-9D	C13-9C	317.4
08/07/12	C13-9C	C13-9B	344.6
08/07/12	C13-9B	C13-9A	388
08/07/12	C15-9G	C15-17C	199.8
08/07/12	C13-17D	C13-17C	100.6
08/07/12	C13-17C	C13-17B	233.4
08/07/12	C13-17B	C13-17A	231.8
08/07/12	C13-17A	C13-17	234
08/07/12	C13-16F	C13-16D	125.2
08/07/12	C13-16E	C13-16D	292.3
08/07/12	C13-16D	C13-16C	31.8
08/07/12	C13-16C	C13-16B	311.6
08/07/12	C13-16B	C13-16A	58.3
08/07/12	C13-16A	C13-16	244.3
08/08/12	C17-3R	C17-3Q	101.7
08/08/12	C17-3Q	C17-3D	278.8
08/08/12	C17-3D	C17-3C	362.3
08/08/12	C17-3C	C17-3B	336.2
08/08/12	C17-3B	C17-3A	107.8
08/08/12	C17-6	C17-5	308.9
08/08/12	C17-5	C17-4	338.3
08/08/12	C17-4	C17-3	136.7
08/08/12	C17-3A	C17-3	182.1
08/08/12	C13-1F	C13-1E	33.4
08/08/12	C13-1E	C13-1D	91.8
08/08/12	C15-9D	C15-9C	288.9
08/08/12	C15-9C	C15-9B	362.7
08/08/12	C15-7B	C15-7A	335.1
08/08/12	C15-9E	C15-9B	139.9
08/08/12	C15-9B	C15-9A	129.8
08/08/12	C13-17F	C15-9E	257.3
08/08/12	C15-9F	C15-9A	27.8
08/08/12	C15-7E	C15-7D	236.3
08/08/12	C15-7C	C15-7B	332.1
08/08/12	C15-7D	C15-7B	134.5
08/08/12	C15-7B	C15-7A	141.8
08/09/12	C17-2E	C17-2D	122.9
08/09/12	C17-2D	C17-2C	184.13
08/09/12	C17-2C	C17-2B	289
08/09/12	C17-2R	C17-2D	249.7
08/09/12	C17-2O	C17-2B	59.8
08/09/12	C17-2N	C17-2B	239.2
08/09/12	C15-11	C15-10	256.4
08/09/12	C15-10	C15-9	325.1
08/09/12	C15-9A	C15-9	275
08/09/12	C15-9	C15-8	262.5
08/09/12	C15-8	C15-7	225.6
08/09/12	C15-5B	C15-5A	82
08/09/12	C15-5A	C15-5	185.7

Date	MHFROM	MHTO	Footage
08/09/12	C15-5	C15-4	362.3
08/15/12	C13-26	C13-25	395.5
08/15/12	C13-25	C13-24	382.4
08/15/12	C13-24A	C13-24	200
08/15/12	C13-24	C13-23	222.6
08/15/12	C13-22	C13-22	125.2
08/15/12	C13-22B	C13-22A	166.7
08/15/12	C13-22A	C13-22	173
08/15/12	C13-22C	C13-22	356.6
08/16/12	C10-20A	C10-20	298.6
08/16/12	C13-20	C13-20B	171.2
08/16/12	C13-20B	C13-20	313.7
08/16/12	C13-22	C13-21	373.4
08/16/12	C13-21	C13-20	369.3
08/16/12	C13-20	C13-19	301.4
08/16/12	C15-20	C15-19	256.1
08/16/12	C15-19	C15-18	243.5
08/16/12	C13-19	C13-18	298.8
08/16/12	C13-18	C13-17	300.1
08/17/12	C15-18	C15-17	255.9
08/17/12	C15-17	C15-16	255.4
08/17/12	C15-16C	C15-16B	101.1
08/17/12	C15-16B	C15-16A	234.6
08/17/12	C15-16A	C15-16	224.9
08/17/12	C15-16	C15-15	37.5
08/17/12	C15-15	C15-14	380.8
08/17/12	C15-14B	C15-14A	87.8
08/17/12	C15-14A	C15-14	163.7
08/17/12	C15-14	C15-13	347.9
08/17/12	C15-13	C15-12	322.1
08/17/12	C15-12	C15-11	71.3
08/17/12	C13-28F	C13-28D	216.4
08/17/12	C13-18E	C13-28D	138.9
08/17/12	C13-28D	C13-28C	99.5
08/17/12	C13-28C	C13-28	300
08/17/12	C15-11G	C15-11E	125.6
08/17/12	C15-11F	C15-11E	301.1
08/20/12	C15-11K	C15-11J	146.1
08/20/12	C15-11J	C15-11I	201.4
08/20/12	C15-11H	C15-11B	277.1
08/20/12	C15-11D	C15-11C	247.2
08/20/12	C15-11C	C15-11B	139.3
08/20/12	C15-11B	C15-11A	525.3
08/21/12	L11C	L11B	246
08/21/12	L11B	L11A	232.9
08/21/12	L11A	L11	240.7
08/21/12	L12	L11	226.5
08/21/12	LL1	L10	295.1
08/21/12	L10A	L10	273
08/21/12	L9-2	L9-1	303.4
08/21/12	L9-1	L9	300.4
08/21/12	L10	L9	131.6
08/22/12	K2-5H	K2-5G	194.9
08/24/12	F31-8	F31-7	200.6
08/24/12	F31-7	F31-6	200.4
08/24/12	F31-3C-1	F31-3C	248.3
08/24/12	F31-5D	F31-5C	139
08/24/12	F31-5C	F31-5B	205.4
08/24/12	F31-5B	F31-5	201.8
08/24/12	F31-6	F31-5	199.1
08/24/12	F31-5A	F31-5	177.3
08/24/12	F31-3E	F31-3D	174.1
08/24/12	F31-3D	F31-3B	117.6
08/24/12	F31-3C-1	F31-3B	200.2
08/24/12	C21-7B	C21-7A	382.3
08/24/12	C21-7A	C21-7	385.2
08/24/12	C21-8	C21-7	247.4
08/24/12	C21-6D	C21-6C	295.9
08/24/12	C21-6C	C21-6B	333.8
08/24/12	C21-6B	C21-6A	200.1
08/24/12	C21-6A	C21-6	250
08/24/12	C21-7	C21-6	289.4
08/24/12	C21-5A	C21-5	267.7
08/24/12	C21-6	C21-5	321.5
08/24/12	C21-5	C21-4	234.5
08/24/12	C21-4	C21-3	197.9
08/27/12	F25	F24	550.4
08/27/12	F24A	F24	192.2
08/27/12	F24	F23	436.1
08/27/12	F23A	F23	227.7
08/27/12	F23	F22	309.8
08/27/12	F22	F21	300.6
08/27/12	F21A	F21	197.6
08/27/12	F21-1	F21	232
08/27/12	F21-2	F21-1	185.9
08/27/12	F31-3B	F31-3A	232
08/27/12	F31-3A	F31-3	225.2
08/27/12	F31-5	F31-4	204.8
08/27/12	F31-4	F31-3	195.6
08/27/12	F18-14A	F18-14	195.3
08/27/12	F18-15	F18-14	227.1
08/27/12	F33D	F33C	275.13
08/27/12	F33C	F33B	146.5
08/27/12	F33B	F33A	303.7
08/27/12	F33F	F33E	205.7
08/27/12	F33E	F33A	212.7
08/27/12	F33A	F33	175.3
08/27/12	F34	F33	215.9
08/27/12	F31-3	F31-2	249.8
08/27/12	F31-2	F31-1	274.6
08/27/12	F31-1	F31	243.9
08/27/12	F33	F32	211
08/27/12	F32	F31	199.9
08/28/12	76-4G-1	76-4G	65
08/28/12	76-4G	76-4F	188.5
08/28/12	76-4H	76-4F	149.1
08/28/12	76-4I	76-4F	337.1
08/28/12	76-4F	76-4E	261.8
08/28/12	76-4K	76-4J	257.7
08/28/12	76-4J	76-4E	103.9

Date	MHFROM	MHTO	Footage
08/28/12	76-4E	76-4D	95
08/28/12	76-4D	76-4C	188.9
08/28/12	76-4C	76-4B	200.4
08/28/12	76-4B	76-4A	248.8
08/28/12	76-4A	76-4	251.5
08/28/12	61-6E	61-6D	309.5
08/28/12	61-6C	61-6B	314
08/28/12	61-6B	61-6A	133.5
08/28/12	F15-12	F15-11	336.1
08/28/12	F15-11	F15-10	419.3
08/28/12	F15-10	F15-9	71.8
08/28/12	F15-9B-1	F15-9B	17.5
08/28/12	F15-9B	15-9A	351.3
08/28/12	F15-9C	F15-9A	82.1
08/28/12	F15-9A	F15-9	205.1
08/28/12	F15-9	F15-8	189.8
08/28/12	F15-8	F15-7	249.1
08/28/12	F15-7-1	F15-7	322
08/28/12	61-9B	61-9A	269.5
08/28/12	61-9A	61-9	272.5
08/28/12	61-10	61-9	268.2
08/28/12	61-9D	61-9C	63.9
08/28/12	61-9C	61-9	255
08/29/12	65-5A	65-5	128.8
08/29/12	65-6	65-5	470.4
08/29/12	65-5	65-4	116
08/29/12	65-4	65-3	166.6
08/29/12	65-3	65-2	152.7
08/29/12	65-2	65-1	147
08/29/12	61-8B	61-8A	298.5
08/29/12	61-8D	61-8C	202.1
08/29/12	61-8C	61-8	200.8
08/29/12	61-9	61-8	288.2
08/29/12	46-4D	46-4C	189.1
08/29/12	46-4C	46-4B	159.5
08/29/12	46-4E	46-4B	194.5
08/29/12	46-4B	46-4A	141.2
08/29/12	46-4F	46-4A	158.8
08/29/12	46-4A	46-4	411.9
08/29/12	46-5	46-4	318.9
08/29/12	48-3B	48-3A	225.8
08/29/12	48-3A	48-3	276.9
08/29/12	48-6	48-5	290.2
08/29/12	48-5	48-4	324.8
08/29/12	48-4	48-3	301.8
08/29/12	59-9	59-8	103.5
08/29/12	59-8	59-7	300.1
08/29/12	D25-21F	D25-21E	248.9
08/29/12	59-8	59-7	300
08/30/12	76F	76E	225.1
08/30/12	76E	76D	225.1
08/30/12	76-2D1	76-2D	213.5
08/30/12	76-1E	76-1D	98.3
08/30/12	76-1D	76-1C	252.1
08/30/12	76-1C	76-1B	327.1
08/30/12	76-1B	A77	175.5
08/30/12	76-1A	A77	171.5
08/30/12	61-4A	61-4	300.9
08/30/12	61-6	61-5	164.1
08/30/12	61-5	61-4	148
08/30/12	61-4	61-3	271.4
08/30/12	61-3	61-2	249.4
08/30/12	61-2A	61-2	270.3
08/31/12	76D	76C	81.5
08/31/12	76C	76B	306.8
08/31/12	76B	76A	250.6
08/31/12	76A	A76	250.6
08/31/12	A77	A76	275.4
09/04/12	D25-21G	D25-21H	230.3
09/04/12	D25-21H	D25-21E	248.7
09/04/12	45-17	45-16	244.9
09/04/12	45-16	45-15	234.7
09/04/12	45-15A	45-15	113.8
09/04/12	45-15	45-13	142.4
09/04/12	45-13	45-12	279
09/04/12	45-12	45-11	269.3
09/04/12	45-11	45-10	247.8
09/04/12	D25-21G	D25-21F	230.3
09/04/12	D25-21F	D25-21E	248.7
09/04/12	B30-5	B30-4	139.8
09/04/12	B30-4A	B30-4	134
09/04/12	B30-4	B30-3	22.7
09/04/12	B30-3A	B30-3	142.3
09/04/12	B30-2C	B30-2B	129.3
09/04/12	B30-2B	B30-2	162.9
09/04/12	B30-3	B30-2	253.9
09/04/12	B30-2	B30-1	251.2
09/04/12	B30-1B	B30-1A	68.5
09/04/12	B30-1A	B30-1	149.3
09/04/12	45-7D	45-7C	104.4
09/04/12	45-10	45-9	179.6
09/04/12	45-9	45-8	176.7
09/04/12	45-8	45-7	140.4
09/04/12	45-7C	45-7B	246.8
09/04/12	45-7B	45-7A	218.7
09/04/12	45-7A	45-7	16.2
09/04/12	45-7	45-6	170
09/04/12	46-3A	46-3	220.7
09/04/12	45-6	45-5	313.6
09/04/12	45-5A	45-5	146.2
09/04/12	45-5	45-4	220.9
09/04/12	45-4	45-3	213.5
09/04/12	45-3	45-2	165.9
09/04/12	45-2	45-1	88.5
09/04/12	45-1	45	31.9
09/05/12	B36P	B36N	308.3
09/05/12	B33D	B33C	310.9
09/05/12	B33C	B33B	266.9
09/05/12	B33B	B33A	204
09/05/12	B35-4	B35-3	232.2

Date	MHFROM	MHTO	Footage
09/05/12	B35-3	B35-2	227.6
09/05/12	B35-2	B35-1	287.8
09/05/12	B35-1	B35-1A	305
09/05/12	48-3	48-2	220.2
09/05/12	48-2	48-1	249.6
09/05/12	48-1	48	251
09/05/12	47B	47A	214
09/05/12	47A	47	323.5
09/05/12	B30-1	B30C	279.3
09/05/12	B29D	B29C	235.9
09/05/12	B29C	B29B	147.5
09/05/12	B30D	B30C	328.6
09/05/12	B29A	B29-1A	257.3
09/05/12	B30C	B30B	233
09/05/12	B30B	B29-1A	84.4
09/05/12	K2-9-11	K2-9-10	188.5
09/05/12	K2-9-10B	K2-9-10A	171.3
09/05/12	K2-9-10A	K2-9-10	199.4
09/05/12	K2-9-10	K2-9-9	165.5
09/05/12	K2-9-9B	K2-9-9A	162.4
09/05/12	K2-9-9A	K2-9-9	300
09/06/12	61-7E	61-7D	259
09/06/12	61-7D	61-7C	240
09/06/12	61-7C	61-7B	149
09/06/12	61-7D-1	61-7D	90
09/06/12	59-5E	59-5D	130.7
09/06/12	59-5D	59-5A	97.1
09/06/12	59-5B	59-5A	263.1
09/06/12	59-5A	59-5	82.1
09/06/12	K2-9-8B	K2-9-8A	203.4
09/06/12	K2-9-8A	K2-9-8	161.6
09/06/12	K2-9-9	K2-9-8	173.7
09/06/12	K2-9-6	K2-9-5	265.6
09/06/12	K2-9-5C	K2-9-5	283.9
09/07/12	76-3I	76-3H	202.9
09/07/12	76-3J	76-3H	147
09/07/12	76-3H	76-3G	245.8
09/07/12	76-3G	76-3F	261
09/07/12	76-3F	76-3E	191.1
09/07/12	76-3E	76-3D	200
09/07/12	76-3D	76-3C	250.3
09/07/12	76-3D-1	76-3D	81
09/07/12	76-3C	76-3	251.3
09/07/12	55-1D	55-1C	116.3
09/07/12	55-1C	55-1B	103.5
09/07/12	55-1F	55-1B	174.7
09/07/12	55-2	55-1	76.6
09/07/12	55-1	J-A-56	137.7
09/07/12	55-6B	55-6A	301.2
09/07/12	55-6C	55-6A	120.3
09/07/12	55-6A	55-6	231.6
09/07/12	55-7	55-6	181.7
09/07/12	55-6	55-5	306.4
09/07/12	55-5A	55-5	311.5
09/07/12	55-5	55-4	219.1

Date	MHFROM	MHTO	Footage
09/07/12	55-5F	55-5E	172.4
09/07/12	55-5E	55-5D	132.2
09/07/12	55-5D	55-5C	323.9
09/11/12	C17-2T	C17-2S	188.2
09/11/12	L7D	L7B	179.9
09/11/12	L7C-1	L7C	171.8
09/11/12	L7C	L7B	300.7
09/11/12	L7B	L7A	24.3
09/11/12	L7A	L7	238.4
09/11/12	L7-1	L7	117.7
09/11/12	L8	L7	147.8
09/11/12	L9	L8	248.5
09/11/12	C17-2T	L7A	279.7
09/11/12	K2-5-4G	K2-5-4E	213.8
09/11/12	K2-5-4F	K2-5-4E	81.1
09/11/12	K2-5-4E	K2-5-4C	138.3
09/11/12	K2-5-4D	K2-5-4C	226.5
09/11/12	L7-1E	L7-1C	207
09/11/12	L7-1D	L7-1C	152.9
09/11/12	L7-1C	L7-1B	112.6
09/11/12	L7-1F	L7-1B	178.9
09/11/12	L7-1B	L7-1A	157.3
09/11/12	L7-1G	L7-1A	65.6
09/11/12	L7-4	L7-3	220
09/11/12	L7-3	L7-2	293.9
09/11/12	L7-2	L7-1	208.2
09/11/12	L7-1A	L7-1	37
09/11/12	L7	L6	166.5
09/11/12	L6	L5	99.7
09/11/12	L4-1	L4	140
09/11/12	L5	L4	270.3
09/11/12	L4	L3	289.9
09/11/12	L3-1	L3	140
09/11/12	L3	L2	218.8
09/11/12	L2	L1B	256
09/11/12	L1B-2	L1B-1	80.1
09/11/12	L1B-1	L1B	191.2
09/12/12	C27-12A	C27-12	444.2
09/12/12	C27-13	C27-12	149.5
09/12/12	C27-12	C27-11	137.2
09/12/12	C27-11B	C27-11A	199.8
09/12/12	C27-11A	C27-11	202.8
09/12/12	C27-11	C27-10-1	230.2
09/12/12	C27-10-1	C27-10	249.5
09/12/12	C27-10A	C27-10-O	192.4
09/12/12	C27-10-O	C27-10	213.3
09/12/12	C27-10	C27-9	28
09/12/12	C27-9	C27-8	179.7
09/12/12	C27-8	C27-7	199.9
09/12/12	C27-7J	C27-7	275
09/12/12	C27-7B	C27-7A	189.2
09/12/12	C27-7A	C27-7	221.1
09/12/12	C27-7	C27-6	191.4
09/12/12	C27-6	C27-5	200.5
09/12/12	C27-5	C27-4	29.9

Date	MHFROM	MHTO	Footage
09/12/12	C27-4A	C27-4	389.3
09/12/12	C21-10	C21-1C	127.4
09/12/12	C21-1C	C21-1B	280.6
09/12/12	C21-1E	C21-1B	56.3
09/12/12	C21-1B	C21-1A	253.1
09/12/12	C21-1A	C21-1	249.2
09/12/12	L1A-1	L1A	140
09/12/12	L1B	L1A	267
09/12/12	L1A-1	L1	143
09/12/12	K40-1B	K40-1A	250.7
09/12/12	K40-1A	K40-1	249.8
09/12/12	K40-2B	K40-2A	233.3
09/12/12	C40-14	C40-13	193.7
09/12/12	C40-13	C40-12	279.7
09/13/12	C21-2i	C21-2H	147.2
09/13/12	C21-2H	C21-2G	153.1
09/13/12	C21-2G	C21-2C	192.5
09/13/12	C21-2K	C21-2J	165.8
09/13/12	L11	L10	295.1
09/13/12	K12-14G	K12-14F	212.5
09/13/12	K12-14F	K12-14E	254.9
09/13/12	K12-14D5	K12-14D4	130.3
09/13/12	K12-14D4	K12-14D3	38.7
09/13/12	K12-14D3	K12-14D1	276
09/13/12	K12-14D2	K12-14D1	156.4
09/17/12	K2-5-4T	K2-5-4H	46.5
09/17/12	K2-5-4H	K2-5-4A	54.4
09/17/12	K2-5-4C	K2-5-4B	267.7
09/17/12	K2-5-4B	K2-5-4A	83.5
09/17/12	K2-5-5	K2-5-4	156.5
09/17/12	K2-5-4A	K2-5-4	157.6
09/17/12	K2-5-4	K2-5-3	161.5
09/17/12	K2-5-3	K2-5-2	279.8
09/17/12	K2-5-2	K2-5-1	286
09/17/12	K2-5-1A	K2-5-1	247.2
09/17/12	K2-5-1	K2-5	186.2
09/19/12	C13J	C13G	213.6
09/19/12	C13I	C13H	199.8
09/19/12	C13H	C13G	280.4
09/19/12	C8-6E	C8-6D	174
09/19/12	C8-6D	C8-6C	269
09/19/12	D25-21H	D25-21D	259.3
09/19/12	D25-21D	D25-21A	239.9
09/19/12	D25-21C	D25-21B	207.7
09/19/12	D25-21B	D25-21A	347.2
09/19/12	D25-21A	D25-21	275.5
09/19/12	D25-24	D25-23	151.8
09/19/12	D25-22	D25-21	23
09/19/12	D25-15J	D25-15F	243.8
09/19/12	D25-23	D25-22	314.9
09/20/12	K2-5-11D	K2-5-10	256.5
09/20/12	K2-5-10	K2-5-9	258
09/20/12	K2-5-9	K2-5-8	298.3
09/21/12	D25-18B	D25-18A	185.6
09/21/12	D25-18C	D25-18A	206.9
09/21/12	D25-18A	D25-18	265.6
09/21/12	D25-19	D25-18	264.4
09/21/12	D25-18	D25-17	282.7
09/25/12	K12-13A	K12-13	296.8
09/25/12	K12-13	K12-12	252.4
09/25/12	K12-12	K12-11	233.6
09/25/12	K12-11B	K12-11A	173.8
09/25/12	K12-11A	K12-11	248.9
09/25/12	K12-11	K12-10	285.7
09/25/12	K12-14E	K12-14D	336.7
09/25/12	K12-14D1	K12-14D	186.8
09/25/12	K12-14D	K12-14C	273.4
09/25/12	K12-14C	K12-14B	269.5
09/26/12	B10-35E	B10-35D	239.6
09/26/12	B10-35D	B10-35C	164.1
09/26/12	B10-35F	B10-35C	145.9
09/26/12	B10-35C	B10-35B	152.2
09/26/12	B10-35B	B10-35A	97.6
09/26/12	B10-35A	B10-35	222.8
09/26/12	B10-36	B10-35	80
09/26/12	B10-38	B10-37	162.1
09/26/12	B10-37	B10-36	166.8
09/26/12	B10-38B	B10-38A	120.3
09/26/12	B10-38C	B10-38A	122
09/26/12	B10-38A	B10-38	157.1
09/26/12	H35C	H35B	306.1
09/26/12	H35B	H35A	51.7
09/26/12	H35A	B10-38	122.5
09/26/12	H26-12	H26-11	134.2
09/26/12	H26-11A	H26-11	44.9
09/26/12	H26-11	H26-10	47.4
09/26/12	H26-10	H26-9	54.6
09/26/12	H26-9	H26-8	120.7
09/26/12	H26-8	H26-7	113.9
09/26/12	H26-7D	H26-7A	158.6
09/26/12	H26-7C	H26-7B	104.6
09/26/12	H26-7B	H26-7A	109.1
09/26/12	H26-7A	H26-7	58.1
09/26/12	H26-7	H26-6	128
09/26/12	H26-6	H26-5	89.8
09/26/12	K12-14B	K12-14A	204.9
09/26/12	K12-14A	K12-14	295
09/28/12	K2-2G	K2-2F	129.3
09/28/12	K2-2F	K2-2D	143.2
09/28/12	K2-2E	K2-2D	203.1
09/28/12	K2-2D	K2-2C	244.9
09/28/12	K2-2C	K2-2B	150.4
09/28/12	K2-2H	K2-2B	297.5
09/28/12	K2-2B	K2-2A	186.6
09/28/12	K2-2J	K2-2A	181.3
09/28/12	K12-14Q	K12-14P	57.7
09/28/12	K12-14P	K12-14K	405.8
09/28/12	K12-14L	K12-14K	250.1
09/28/12	K12-14Y	K12-14X	360.6
09/28/12	K2-10	K2-9	200.8

Date	MHFROM	MHTO	Footage
09/28/12	K2-9-3	K2-9-1	229.7
09/28/12	K2-9-1	K2-9	176.2
09/28/12	K2-8	K2-7	198.1
09/28/12	K2-7	K2-6-1	319.6
09/28/12	K2-6	K2-5	251.7
09/28/12	K2-5A	K2-5	107
09/28/12	K2-3A	K2-3	202.6
09/28/12	K2-5	K2-4	337.5
09/28/12	K2-4	K2-3	185.2
10/01/12	K12-14K	K12-14J	270.4
10/01/12	K12-14J	K12-14I	248.3
10/01/12	K12-14-1	K12-14I	215.9
10/01/12	K12-14I	K12-14H	339.8
10/01/12	D27K	D27J	234.2
10/01/12	D27J	D27I	297.5
10/01/12	D12-14H	D12-14G	190.3
10/01/12	K12-9L	K12-9	226.5
10/01/12	K12-9A	K12-9	252.7
10/01/12	K12-10	K12-9	288.3
10/01/12	K12-9	K12-8	233.9
10/01/12	K12-8	K12-7	225.3
10/01/12	K12-7	K12-6	263.3
10/01/12	K12-6	K12-5	199.8
10/01/12	K12-5A	K12-5	307.4
10/01/12	K12-5	K12-4	349.7
10/03/12	H4	H3	176.5
10/03/12	H3	H2	200.2
10/03/12	55-5	55-4	219.1
10/03/12	55-4	55-3	128.8
10/03/12	55-3	55-2	123
10/03/12	55-2	55-1	42.4
10/03/12	D27I	D27G	260.9
10/03/12	D27G	D27A	243.9
10/03/12	H2B	H2A	257.7
10/03/12	H2A	H2	251.1
10/03/12	K12-4	K12-3	183.9
10/03/12	K12-3	K12-2	321
10/18/12	L9-7	L9-6	236
10/18/12	L16A	L16	300.6
10/18/12	L17	L16	235.7
10/18/12	L13A	L13	261.2
10/18/12	L15	L14	103.4
10/18/12	L14	L13	141.4
10/22/12	B35-14	B35-13	103.6
10/22/12	B35-13	B35-12	96.7
10/22/12	B35-12	B35-11	59.5
10/22/12	B35-11	B35-10	210.8
10/22/12	B35-10	B35-9	273.6
10/22/12	B35-9	B35-8	179.2
10/22/12	B35-8	B35-7	188.7
10/22/12	F15-7-4C	F15-7-4	299
10/22/12	F15-7-4D	F15-7-4C	191.5
10/23/12	F15-7	F15-6	303
10/23/12	F15-6	F15-5	303.5
10/23/12	F15-5	F15-4	237.4

Date	MHFROM	MHTO	Footage
10/23/12	F15-5B	F15-5A	240
10/23/12	F21-A	F21	197.6
10/23/12	B35-6C	B35-6B	290
10/23/12	B35-6B	B35-6A	200.7
10/23/12	B35-6A	B35-6	168.3
10/23/12	B35-7	B35-6	285.2
10/23/12	F18-1B	B35-6	290.3
10/23/12	B35-6	B35-5	315.8
10/23/12	K2-9-14A	K2-9-14	60.1
10/23/12	K2-9-14	K2-9-13	195.6
10/23/12	K2-9-13	K2-9-12	206.6
10/23/12	K2-9-12	K2-9-11	198.5
10/23/12	K2-9-15	K2-9-14	197
10/23/12	K2-9-15A	K2-9-15A	63
10/23/12	C15-9-1A	C15-9-1	507.7
10/23/12	C15-9-3	C15-9-2	94.9
10/23/12	C15-9-2	C15-9-1	34.5
10/23/12	C15-9-1	C15-9	264.5
10/25/12	F29B	F29A	221.2
10/25/12	F29A	F29	211
10/25/12	F30	F29	206.5
10/25/12	F30A	F30	165.8
10/25/12	F18-14	F18-13	201.2
10/25/12	F18-13	F18-12	182.2
10/25/12	F18-12B	F18-12A	269.4
10/25/12	F18-12A	F18-12	263.6
10/26/12	K2-5-4I	K2-5-4H	46.5
10/26/12	K2-5-6	K2-5-5	201.1
10/26/12	K2-5-4I	K2-5-4H	46.5
11/18/12	C27-13F	C27-13E	182.6
11/18/12	C27-13E	C27-13D	150.1
11/16/12	B30-4A	B30-4	134
11/26/12	76-4	76-3	284.5
11/30/12	H13-14	H13-16	249.6
12/05/12	D25-32	D25-31	329.7
12/07/12	B38-16H	B38-16	230
12/20/12	61-7A	61-7	75
12/22/12	H16A	H16	194.8

Exhibit YC-1

York City Sewerage Needs Analysis: 5-Year Projection of Additional Flows (gpd)

Map No.	Development Name	2013	2014	2015	2016	2017	Total
1	Northwest Triangle development	0	5000	6500	14000	1400	26900
2	Codorus Homes at Thackston Park	0	17000	0	0	0	17000
3	454 E Princess St (ACCO site)	0	0	1400	0	0	1400
4	200 N Broad Street (Graybill property)	0	0	1225	0	0	1225
5	44-50 W Market St (Woolworth building)	0	0	1800	0	0	1800
6	373-379 W King St	0	0	0	1200	0	1200
7	37 W Market St	2550	0	0	0	0	2550
8	141-147 W Market St	6650	0	0	0	0	6650
9	700 Linden Av	8000	8500	0	0	0	16500
10	939 Monocacy Rd	2500	0	0	0	0	2500
11	413 Norway St	720	0	0	0	0	720
12	233-261 S George St, 13-25 E College Av	350	4200	8050	0	0	12600
13	241 S Court St	2850	0	0	0	0	2850
14	43-45 W Market St	0	720	700	0	0	1420
15	303-335 W Maple St	0	0	2800	2800	0	5600
16	625 E Philadelphia St	1750	0	0	0	0	1750
17	210 York St	700	1300	0	0	0	2000
18	564-568 Company St	700	0	0	0	0	700
19	922 Loucks Rd	2100	0	0	0	0	2100
20	600-630 S Pine St	0	350	700	0	0	1050
21	403 S Albemarle St	700	0	0	0	0	700
22	239 E Boundary Ave	3500	4200	0	0	0	7700
23	rear of 700 S Pine St (232 Rose Alley)	0	0	1750	1750	0	3500
24	miscellaneous infill residential development	1400	1400	1400	1400	0	5600
	Total	**34470**	**42670**	**26325**	**21150**	**1400**	**126015**

Appendix H
York Township Chapter 94 Municipal Wasteload Management Report

York Township
York County, Pennsylvania

2012 Municipal Wasteload Management Report

York Township System Tributary to
the City of York Wastewater Treatment Plant

March 2013

Gannett Fleming

Excellence Delivered As Promised

Contents

Section	Title	Page
1.0	DESCRIPTION OF WASTEWATER COLLECTION AND CONVEYANCE FACILITIES	1
2.0	SYSTEM MONITORING, MAINTENANCE, AND REPAIR	1
3.0	WASTEWATER COLLECTION SYSTEM CONDITION	2
4.0	WASTEWATER CONVEYANCE SYSTEM CONDITION	2
4.1	Marlborough Pump Station	3
4.2	Leader Heights Road Pump Station	4
4.3	Joppa Road Pump Station	5
4.4	Spangler Meadows Pump Station	7
4.5	Imperial Drive Pump Station	8
4.6	Lentzlyn Drive Pump Station	9
5.0	2012 WASTEWATER FLOW TO CITY OF YORK WWTP	11
6.0	SUMMARY OF CONNECTION PERMITS	11
7.0	PROJECTED COLLECTION SYSTEM CONNECTIONS AND EXTENSIONS	12
8.0	TOTAL NITROGEN OFFSET CREDITS	12
9.0	INFILTRATION/INFLOW REDUCTION PLAN	13

Tables

Table	Title	Page
1	Marlborough Pump Station-2012 Operating Data	3
2	Marlborough Pump Station-Estimated 2-Year Flow Increase	4
3	Leader Heights Pump Station-2012 Operating Data	5
4	Leader Heights Pump Station-Estimated 2-Year Flow Increase	5
5	Joppa Road Pump Station-2012 Operating Data	6
6	Joppa Road Pump Station-Estimated 2-Year Flow Increase	6
7	Spangler Meadows Pump Station-2012 Operating Data	7
8	Spangler Meadows Pump Station-Estimated 2-Year Flow Increase	8
9	Imperial Drive Pump Station-2012 Operating Data	9
10	Imperial Drive Pump Station-Estimated 2-Year Flow Increase	9
11	Lentzlyn Drive Pump Station-2012 Operating Data	10

12 Lentzlyn Drive Pump Station-Estimated 2-Year Flow Increase....11
13 Summary of Connection Permits Issued - Past 5 Years 12
14 Summary of Retired On-Lot Systems....13

Attachments

Attachment	Title
1	York Township Maintenance Report
2	York Township Projected Connections
3	York Township Projected Connections Map
4	York Township Reserve Capacity Calculation
5	CAP Correspondence
6	2011 and 2012 Flow Data Comparison

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 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 2012, the Tyler Run Interceptor transported an estimated 160,575 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 five (5) full-time employees to perform operation and maintenance activities of the sanitary sewer system. Major pumping station repairs and electrical problems are addressed through contracted services by Motor Technology, Inc. and Milt's Repair Service, respectively. 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 2012. Attachment 1 provides greater detail regarding the Township's maintenance activities in 2012.

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 106,400 linear feet of sewer within the Tyler Run drainage basin during 2012. The Township has another 10,534 feet of sewer main within the Tyler Run Interceptor flushed and televised by a contractor. Subsequent air test and grouting was performed in 2,478 feet of the interceptor, resulting in 473 joints tested and 146 joints failing. The joints that failed were grouted until they passed an air test. Other rehabilitation work in 2012 included an excavation and replacement of one manhole to manhole section of the 15-inch diameter Tyler Run Interceptor, cured-in-place lining of ten (10) sections of 8-inch diameter sewer totaling 2,074 feet, and lining of the twelve (12) seriously degraded manholes in the Rosenmiller Farms development identified in the 2011 Chapter 94 Report.

The Township will continue its sewer system inspection and rehabilitation program in 2013 to identify and eliminate sources of excessive I/I.

4.0 WASTEWATER CONVEYANCE SYSTEM CONDITION

The Township staff performs routine maintenance 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. Township Public Works staff measured over 5 inches of precipitation falling within a 48-hour period during Hurricane Sandy, which began early on October 29 and extended through the next day. Because this was an extraordinary occurrence that led to the Pennsylvania Governor declaring a State of Emergency, using the pump station run time data for this event in future wastewater flow projections would result in an overestimation of the average daily and maximum day flows. Accordingly, Tables 1 through 12 do not include operating data from the October 2012 storm event.

4.1 Marlborough Pump Station

The Marlborough Pump Station is located adjacent to Interstate 83 off Jonquil Road. The original design capacity of the station was 240 gallons per minute (gpm). The pump impellers were replaced in 1996 to increase the pumping capacity. The pumping capacity is determined by performing drawdown testing of the pumps. The most recent drawdown test results demonstrated that the pumping capacity was 449 gpm with the largest pump out of service and 501 gpm with both pumps running. An emergency generator is onsite for standby power.

Table 1 includes an analysis of the weekly meter readings at the Marlborough Pump Station during 2012.

Table 1: Marlborough Pump Station-2012 Operating Data

	Recorded Operating Time (hours per day) (1)	Gallons Pumped per Day (2)	Pumping Station Capacity (gallons per day) (3)	Peaking Factor (Max/Avg)
Minimum	4.50	121,230	540,000	1.72
Average	5.61	151,133		
Maximum	9.64	259,702		

Notes:

(1) Runtime data provided by York Township Public Works Department. Does not include the October 2012, "Superstorm Sandy" event.

(2) Based on hours of operation multiplied by actual capacity of 449 gpm.

(3) Based on the permitted capacity for rehabilitated station with one pump out-of-service.

The Township completed design for the replacement of the Marlborough Pump Station during 2012 and secured a Water Quality Management Part II Permit for the project. The work is intended to replace equipment at the end of its useful operating life. The existing, fixed-speed pumps will be replaced with new, variable speed, submersible pumps, each with a rated capacity of 375 gpm at a Total Dynamic Head of 124 feet. The station will also be 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 event, such as loss of station power. The

new Water Quality Management Permit sets the rated capacity of the facility to 540,000 gpd. Bids for the rehabilitation were received in February 2012, and the contractors started work in summer 2012. Construction will be completed in early 2013.

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 2012, the pump station is operating 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		
	2012	2013	2014
Avg. Daily Flow (gpd) (1)	151,133	161,933	257,133
Max. Day Flow (gpd)	259.702	278,525	442,269
% Loading (design)	48.1%	51.6%	81.9%

Notes:

(1) Future year average flows based on projections of wastewater flows for planned developments tributary to the Marlborough Pump Station (see Attachment 2).

4.2 Leader Heights Road Pump Station

The Leader Heights Pump Station is located adjacent to Interstate 83 on Keyway Drive and serves a predominantly commercial area. The pump station has a design capacity of 80 gpm. The pumping capacity is determined by performing drawdown testing of the pumps. The most recent drawdown test results demonstrated that the pumping capacity was 53 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 weekly basis by the Township staff. Table 3 includes an analysis of the weekly meter readings at the Leader Heights Pump Station during 2012.

Table 4 presents a summary of the projected flows to the pump station for the next two (2) years based on anticipated growth within the service area, as detailed in Attachment 2.

Based on the average daily operation time during 2012, the pump station is operating at under 2 percent of its design capacity. Although there are significant increases of flow projected in the next two (2) years to the Leader Heights Pump Station, no overloads are expected.

Table 3: Leader Heights Pump Station-2012 Operating Data

	Recorded Operating Time (hours per day) (1)	Gallons Pumped per Day (2)	Pumping Station Capacity (gallons per day) (3)	Peaking Factor (Max/Avg)
Minimum	0.19	604	76,320	1.83
Average	0.35	1,113		
Maximum	0.64	2,035		

Notes:

(1) Runtime data provided by York Township Public Works Department. Does not include the October 2012, "Superstorm Sandy" event.
(2) Based on hours of operation multiplied by actual capacity of 53 gpm.
(3) Based on the actual capacity of 53 gpm and 24 hours of runtime.

Table 4: Leader Heights Pump Station-Estimated 2-Year Flow Increase

	Year		
	2012	2013	2014
Avg. Daily Flow (gpd) (1)	1,113	1,813	9,113
Max. Day Flow (gpd)	2,035	3,318	16,677
% Loading (design)	1.8%	2.9%	14.5%
% Loading (capacity)	2.7%	4.3%	21.9%

Notes:

(1) Future year average flows based on projections of wastewater flows for planned development tributary to the Leader Heights Pump Station (see Attachment 2)

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. 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 weekly basis by the Township staff. Table 5 includes an analysis of the weekly meter readings at the Joppa Road Pump Station during 2012.

Table 5: Joppa Road Pump Station-2012 Operating Data

	Recorded Operating Time (hours per day) (1)	Gallons Pumped per Day (2)	Pumping Station Capacity (gallons per day) (3)	Peaking Factor (Max/Avg)
Minimum	6.19	31,569	122,400	1.26
Average	7.58	38,658		
Maximum	9.54	48,654		

Notes:

(1) Runtime data provided by York Township Public Works Department. Does not include the October 2012, "Superstorm Sandy" event.
(2) Based on hours of operation multiplied by actual capacity of 85 gpm.
(3) Based on the actual capacity of 85 gpm 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 2012, the pump station is operating at under 45 percent of its design 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		
	2012	2013	2014
Avg. Daily Flow (gpd) (1)	38,658	41,408	43,508
Max. Day Flow (gpd)	48,654	52,174	54,820
% Loading (design)	42.2%	45.3%	47.6%
% Loading (capacity)	39.8%	42.6%	44.8%

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).

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. 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 weekly basis by the Township staff. Table 7 includes an analysis of the weekly meter readings at the Spangler Meadows Pump Station during 2012.

Table 7: Spangler Meadows Pump Station-2012 Operating Data

	Recorded Operating Time (hours per day) (1)	Gallons Pumped per Day (2)	Pumping Station Capacity (gallons per day) (3)	Peaking Factor (Max/Avg)
Minimum	1.77	9,027	122,400	1.61
Average	3.29	16,779		
Maximum	5.29	26,979		

Notes:

(1) Runtime data provided by York Township Public Works Department. Does not include the October 2012, "Superstorm Sandy" event.
(2) Based on hours of operation multiplied by actual capacity of 85 gpm.
(3) Based on the actual capacity of 85 gpm 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 average daily operation time during 2012, the pump station is operating approximately 23 percent of its design 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		
	2012	2013	2014
Avg. Daily Flow (gpd) (1)	16,779	16,779	16,779
Max. Day Flow (gpd)	26,979	26,979	26,979
% Loading (design)	23.4%	23.4%	23.4%
% Loading (capacity)	22.0%	22.0%	22.0%

Notes:

(1) Future year average flows based on projections of wastewater flows for planned developments tributary to the Spangler Meadows Pump Station (see Attachment 2).

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. 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 weekly basis by the Township staff. Table 9 includes an analysis of the weekly meter readings at the Imperial Drive Pump Station during 2012

Table 9: Imperial Drive Pump Station-2012 Operating Data

	Recorded Operating Time (hours per day) (1)	Gallons Pumped per Day (2)	Pumping Station Capacity (gallons per day) (3)	Peaking Factor (Max/Avg)
Minimum	2.40	47,520	475,200	1.71
Average	3.10	61,380		
Maximum	5.30	104,940		

Notes:

(1) Runtime data provided by York Township Public Works Department. Does not include the October 2012, "Superstorm Sandy" event.
(2) Based on hours of operation multiplied by actual capacity of 330 gpm.
(3) Based on the actual capacity of 330 gpm and 24 hours of runtime.

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 average daily operation time during 2012, the pump station is operating at approximately 21 percent of its design capacity. No overloads are expected at the Imperial Drive Pump Station over the next two (2) years

Table 10: Imperial Drive Pump Station-Estimated 2-Year Flow Increase

	Year		
	2012	2013	2014
Avg. Daily Flow (gpd) (1)	61,380	63,130	149,930
Max. Day Flow (gpd)	104,940	107,952	256,380
% Loading (design)	20.8%	21.4%	50.9%
% Loading (capacity)	22.1%	22.7%	54.0%

Notes:

(1) Future year average flows based on projections of wastewater flows for planned developments tributary to the Imperial Drive Pump Station (see Attachment 2).

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 weekly basis by the Township staff. Table 11 includes an analysis of the weekly meter readings at the Lentzlyn Drive Pump Station during 2012.

Table 11: Lentzlyn Drive Pump Station-2012 Operating Data

	Recorded Operating Time (hours per day) (1)	Gallons Pumped per Day (2)	Pumping Station Capacity (gallons per day) (3)	Peaking Factor (Max/Avg)
Minimum	2.24	13,440	144,000	1.30
Average	3.19	19,140		
Maximum	4.14	24,840		

Notes:

(1) Runtime data provided by York Township Public Works Department. Does not include the October 2012, "Superstorm Sandy" event.
(2) Based on hours of operation multiplied by actual capacity of 100 gpm.
(3) Based on the actual capacity of 100 gpm 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 average daily operation time during 2012, the pump station is operating at just over 17 percent of its design capacity. No overloads are expected at the Lenyzlyn Drive Pump Station over the next two (2) years.

Table 12: Lentzlyn Drive Pump Station-Estimated 2-Year Flow Increase

	Year		
	2012	2013	2014
Avg. Daily Flow (gpd) [1]	19,140	19,140	19,140
Max. Day Flow (gpd)	24,840	24,840	24,840
% Loading (design)	17.3%	17.3%	17.3%
% Loading (capacity)	17.3%	17.3%	17.3%

Notes:

(1) Future year average flows based on projections of wastewater flows for planned developments tributary to the Lentzlyn Pump Station (see Attachment 2).

5.0 2012 WASTEWATER FLOW TO CITY OF YORK WWTP

The 2012 average daily wastewater flow from the York Township meter on the Tyler Run Interceptor (TY01) was 1,554,584 gpd. This value includes flow from Spring Garden Township, which averaged 160,575 gpd in 2012. 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 2012 average daily wastewater flow value. Additionally, there are a number of unmetered 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 39,799 gpd in 2012. Accordingly, the 2012 average daily flow from York Township into the City of York system was 1,433,808 gpd.

6.0 SUMMARY OF CONNECTION PERMITS

During 2012, there were no new permits issued for connections to the York Township sewer system. As shown in Table 13, a total of 181 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
2008	45
2009	123
2010	7
2011	6
2012	0
Total	**181**

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 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 3, 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.

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 connection of properties to the public sewer system that

were previously served by 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 by connecting the property to the sewage conveyance system 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 2012, there were no on-lot systems located in York Township that were retired through a connection to 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
2004	0	0
2005	1	25
2006	3	75
2007	4	100
2008	27	675
2009	109	2,725
2010	0	0
2011	0	0
2012	0	0
Total	154	3,850

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 Spring Garden Township to the City of York Sewer System. Flow metering results for the previous Chapter 94 report period of calendar year 2011 indicated that surcharge conditions existed in the 18-inch interceptor sewer

immediately before its connection to the City of York Sewer System for short periods during three (3) major wet weather events, one of which was during a declared State of Emergency by the Pennsylvania Governor for Tropical Storm Lee in September 2011. According to the York Township Public Works Department, there were no indications of sanitary sewer overflows in the Township System during these three (3) surcharge events.

In response to the 2011 surcharge events, the 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. The PADEP subsequently issued a letter dated June 21, 2012 prohibiting new connections tributary to the Tyler Run Interceptor until the hydraulic overload conditions were adequately addressed.

York Township responded with a July 6, 2012 letter requesting that the connection ban be lifted by PADEP in response to the Township's implementation of the CAP. A follow-up letter to PADEP on October 18, 2012 included additional findings and summarized the efforts undertaken to reduce I/I within the sewer system tributary to the Tyler Run Interceptor. The Township's October 18, 2012 letter is included as Attachment 5. PADEP responded with a letter dated November 1, 2012, lifting the connection ban. PADEP's letter is included as Attachment 6.

The following is a summary of the activities undertaken by York Township in 2012 to reduce I/I within the Sewer System tributary to the Tyler Run Interceptor:

1.) Flushed and internally televised 10,534 of the Tyler Run Interceptor.
2.) Air test and grouted 2,478 feet of the Tyler Run Interceptor, resulting in 473 joints tested and 146 joints grouted.
3.) Flushed and televised 106,400 feet of sewer within the Tyler Run drainage basin.
4.) Performed cured-in-place lining of ten sections of 8-inch diameter sewer.
5.) Dug-up and externally repaired two (2) sections of sewer that could not be internally repaired.

6.) Performed night-time weiring of Spring Garden Township and York Township connections to the Tyler Run Interceptor. Met on August 16, 2012, with Spring Garden Township staff and provided them copies of their weir readings along with photographs and reports of Spring Garden laterals that had nighttime flow. Requested Spring Garden Township perform follow-up corrective action.

The Township's efforts eliminated the surcharge conditions within the Tyler Run Interceptor. Continuous flow meeting at YT01 did not record any surcharge events after Tropical Storm Lee in September 2011 until the Superstorm Sandy event in October 2012. Both Hurricane Lee and Hurricane Sandy events resulted in the Pennsylvania Governor declaring States of Emergency for York County. York Township staff measured over five inches of precipitation within a 48-hour period during Hurricane Sandy (October 29-31). During the storm, surcharge conditions were experienced in the Tyler Run Interceptor, but quickly returned to normal conditions flow conditions.

The York WWTP staff and consultant prepared a summary comparison of the responses of the metered lines tributary to the York City WWTP during Tropical Storm Lee in September 2011 and Hurricane Sandy in October 2012. A copy of the comparison is provided in Attachment 7. The comparison shows that the York Township meter at YT01 had the lowest peaking factor at 2.49 of the 17 meters within the system for Hurricane Sandy. Peak flows measured by the YT01 meter where 51% less during Hurricane Sandy than for Tropical Storm Lee (8.77 mgd for Lee and 4.28 mgd for Sandy) compared to only a 2% reduction in peak flows at the York City WWTP (73.60 mgd to 72.00 mgd). The lower peak flows and peaking factor for York Township's Tyler Run interceptor compared to the other sewer sheds within the York City WWTP service area can be attributed to a large extent to the efforts of York Township staff to identify and eliminate sources of I/I.

It should be noted that the three (3) rain events in September 2012 of 2.08, 2.85 and 1.54 inches did not result in any surcharging at YT01 within the 18-inch diameter Tyler Run Interceptor.

York Township will continue its I/I reduction program during 2013. Major activities planned for 2013 include flow metering at key points within the basin and update of the hydraulic model of the Tyler Run Interceptor. The model was last updated in 2004 and did not identify an immediate need to expand portions of the Tyler Run Interceptor. The 2013 hydraulic model update will use current flow records and projected future flows from the Township's Chapter 94 Report and the recently completed Land Use Assumptions Report. The updated model will be used to determine if and when expansion of portions of the Tyler Run Interceptor will be needed and the degree of expansion needed to meet future needs.

YORK TOWNSHIP

Public Works Department

194 Oak Rd., Dallastown,Pa. 17313-9300

Phone (717) 741-3513 Fax (717) 741-1394

January 17, 2013

Mr. Mark Malarich
P.O. Box 67100
Harrisburg, PA 17106-7100

Re: 2012 Municipal Wasteload Management Report
York City WWTP

Dear Mr. Malarich

York Township employs five (5) full time employees certified by Pa. DEP to perform maintenance of the sanitary sewer system which flows to the York City WWTP. These five have studied and successfully passed the DEP examination obtaining the E4 license this year. Our personnel perform routine maintenance twice weekly on six (6) sewer pumping stations. Each pump station is monitored by a dial up paging system constantly to ensure a timely response in the event of a mechanical failure.

The township owns the following maintenance equipment. There is one Vac-Con sewer machine for flushing and pumping of lines and stations, one 3500 gallon water tank truck to complement the Vac-Con. We own one high cube van equipped with a TV studio and a self propelled television camera for 8" or greater sewer lines. We have a Cues model pan and tilt self propelled television camera for 6" or greater sewer lines, 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.

During 2012 our crew flushed and televised 106,400 lineal feet in the Tyler Run drainage basin. We did one dig and repair of note to a 15" ESVC pipe located in the interceptor on Powder Mill Rd between MH427 and 428. We also flushed and televised 66 runs totaling 10,534' in the Tyler Run Interceptor using a contractor. These runs consisted of 15 and 18" ESVC with 5'pipe sections. 11 runs totaling 2,478' were then pressure tested and grouted if they failed. In all 473 joints were tested with 146 failing for a 30% failure rate. We were able to seal all the failing joints using 402 gallons of grout to pass all failures. We are actively involved in the pipe lining process when suitable to rehabilitate aging lines. We find this method more

cost effective than digging and replacing. This year we lined 10 runs of 8" ESVC with a cured in place liner. These 10 runs totaled 2074'. All laterals were reinstated and grouted. This process should have a significant reduction in the I/I. We have lined 12 manholes as identified in last year's report as degraded by hydrogen sulfide gas. These manholes are located immediately downstream from a Spring Garden Township connection to the York Township sanitary sewer system.

This year we have moved forward on the previously identified Marlborough pump station replacement. The design and permitting were approved and issued. The contracts were advertised, bid and awarded The E & S plan was instated and construction has begun. The new wet well and valve vault have been installed. We anticipate completion of the project in early 2013.

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

2012 York City WWTP Chapter 94 Report

53 GPM rated in 2009	Leader Heights Pump Station			
	Hours of operation/day	Gallons pumped/day	Actual pump capacity(GPD)	Peaking Factor
Minimum	0.19	604		
Average	0.36	1,145		
Maximum	0.91	2,894	76,320	2.52

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	6.19	31,569		
Average	7.58	38,658		
Maximum	9.54	48,654	122,400	1.25

449 GPM rated in 2009 501gpm(both motors)	Marlborough Pump Station			
	Hours of operation/day	Gallons pumped/day	Actual pump capacity(GPD)	Peaking Factor
Minimum	4.50	121,230		
Average	5.61	151,133		
Maximum	9.64	259,702	646,560	2.16

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	2.40	47,520		
Average	3.10	61,380		
Maximum	5.30	104,940	475,200	2.44

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	1.77	9,027		
Average	3.29	16,779		
Maximum	5.29	26,979	122,400	2.65

100 GPM rated in 2009	Lentzlyn Drive Pump Station			
	Hours of operation/day	Gallons pumped/day	Actual pump capacity(GPD)	
Minimum	2.24	6800		
Average	3.19	19,140		
Maximum	4.14	24,840	144,000	1.3

* 2012 York City WWTP Chapter 94 Report * HURRICANE SANDY REMOVED

53 GPM rated in 2009	Leader Heights Pump Station				
	Hours of operation/day	Gallons pumped/day	Actual pump capacity(GPD)	Peaking Factor	
Minimum	0.19	604			
Average	0.35	1,113			
Maximum	0.64	2,035	76,320	1.82	*

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	6.19	31,569			
Average	7.58	38,658			
Maximum	9.54	48,654	122,400	1.25	** No change SANDY not Max

449 GPM rated in 2009 501gpm(both motors)	Marlborough Pump Station				
	Hours of operation/day	Gallons pumped/day	Actual pump capacity(GPD)	Peaking Factor	
Minimum	4.50	121,230			
Average	5.61	151,133			
Maximum	9.64	259,702	646,560	1.71	*

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	2.40	47,520			
Average	3.10	61,380			
Maximum	5.30	104,940	475,200	1.7	*

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	1.77	9,027			
Average	3.29	16,779			
Maximum	5.29	26,979	122,400	1.61	*

100 GPM rated in 2009	Lentzlyn Drive Pump Station			
	Hours of operation/day	Gallons pumped/day	Actual pump capacity(GPD)	
Minimum	2.24	6800		
Average	3.19	19,140		
Maximum	4.14	24,840	144,000	1.3

** No change Sandy not max

ATTACHMENT 2
YORK TOWNSHIP
PROJECTED CONNECTIONS TO York City
WASTEWATER TREATMENT PLANT

		Total Gallons	2013	2014	2015	2016	2017
1	Fred Drenning 1 @ 350	350	350				
2	Fair Valley (6) 103 existing mobile home pads 142 new connections 245 @ 350	85,750	350	85,400			
3	Wright Bros & Make Believing Map 04, Parcels 52 & 49A DEP A3-67971-652-3E Commercial	13,650	13,650				
4	Austin E Hartman Estate DEP A3-67971-614-3E 2 @ 350 1870 Powder Mill Rd	700	350	350			
5	Jewish Community Center DEP not filed, daycare expansion	5,000	2,000	3,000			
6	Apple Hill DEP not filed Future development	3,000	350	350	2,300		
7	Cherry Lane A3-67971-611-3E 13 @ 350	4,550	1,050	1,050	1,400	1,050	
8	Jay Crist/Temple Baptist east side of Pine Grove Rd	5,250	5,250				
9A	Kinsley DEP A3-67971-436-3 St. Charles Lot 10	1,400	1,400				

ATTACHMENT 2
YORK TOWNSHIP
PROJECTED CONNECTIONS TO York City
WASTEWATER TREATMENT PLANT

		Total Gallons	2013	2014	2015	2016	2017
10	Steve Kleiser Map HI parcel 259E 1 @ 350	350		350			
11	Kinsley/Lehman Tract Map 20 parcel 154,155,158	11,550	3,850	3,850	3,850		
12	Westminster Place Map 04, Parcels 52 & 49B Senior Living facility	3,000	3,000				
13	Crest DEP P3-67971-159-IV 16 @ 350	5,600		5,600			
14	Sunrise Holdings Map 04 Parcel 41 & 42 Commercial 20@350	7,000	3,500	3,500			
15	Richard Geever (2) (3) DEP P3-67971-259-111 Map HI, Parcel 103E	7,450	1,000				6,450
16	Country Meadows (2) (3) DEP P3-67971-259-III	21,350	1,400		5,250	14,700	
17	Dwight Markey (2) (3) 2 residential @ 350 1 commercial	2,450	350	2,100			
18	Bergdoll/Dew Drop DEP P3-67971-214-IV 1 @ 350	350	350				
19	Cherrywood Map 24 parcel 72 8 @ 350	2,800	700	2,100			

ATTACHMENT 2
YORK TOWNSHIP
PROJECTED CONNECTIONS TO York City
WASTEWATER TREATMENT PLANT

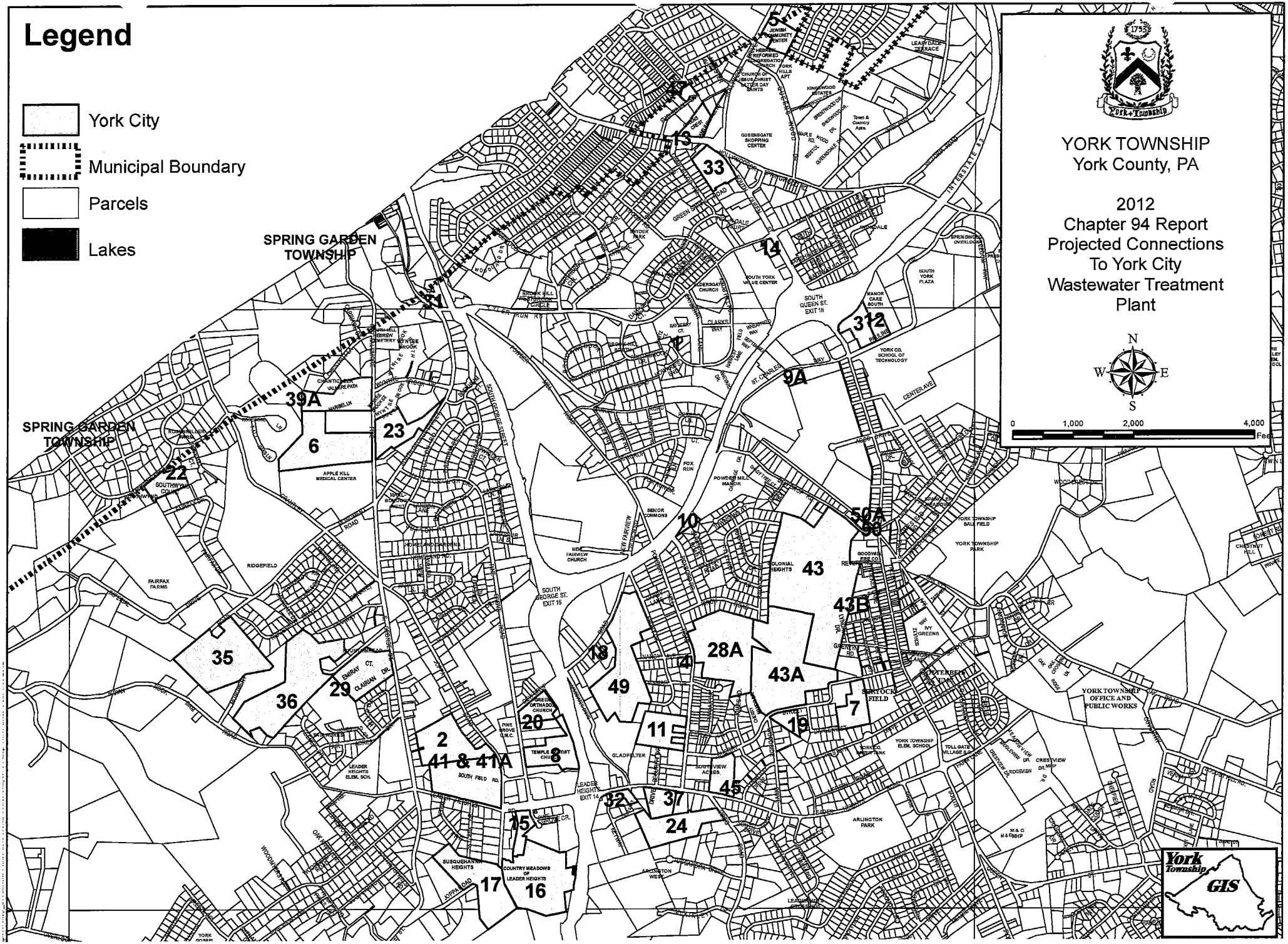
		Total Gallons	2013	2014	2015	2016	2017
20	Greek Orthodox Church Map HI, Parcel 403, 2500 Pine Grove Rd Connect to sewer	1,400	700		700		
21	Reserved for future development						
22	Southwynd (1) DEP P3-67971-184-3 4 @ 350	700	350	350			
23	Kinsley Ducray/Eyster	16,800	8,400	8,400			
24	Presbyterian Homes Map 36, Parcels 210 & 211 Senior living facility (4)	5,000	350	4,650			
25	Reserved for future use						
26	Reserved for future use						
27	Reserved for future use						
28	Reserved for future use						
28A	OSS/office bldg DEP A3-67971-596-3E	800	800				
29	Fountainhead (6) 4 @ 350	1,400	700	700			
30	Reserved for future use						
31	Charles Vernon S. George St.	800	400	400			
32	Shipley/Leader Hts (4) Leader Hts.	3,000	350	2,650			
33	Wellspan DEP A3-67971-627-3E 2050 S Queen St	20,000	350	4,000	4,000	4,000	7,650
34	Reserved for future use						

ATTACHMENT 2
YORK TOWNSHIP
PROJECTED CONNECTIONS TO York City
WASTEWATER TREATMENT PLANT

		Total Gallons	2013	2014	2015	2016	2017
35	Dale Markey (6) Map HHI parcel 468	17,500	350	350	350	350	16,100
36	Heil Markey (6) Map HI parcel 469,469A 428A	33,600	350	350	350	350	32,200
37	Powder Mill Partners Map 36 parcel 204 & 205	15,000	350	7,500	7,150		
38	Reserved for future use						
39A	Chanticleer DEP A3-67971-563-3E 20 @ 250	5,000	2,500	2,500			
40	Reserved for future use						
41	Kinsley/Southfield (2) A3-67971-580-3E	11,550	3,850	3,850	3,850		
41A	Kinsley/Hovis (2)	7,700	3,850	3,850			
42	Reserved for future development						
43	Village Grove Estates Map HI parcel 185 414 @ 350	144,900	350	28,000	28,000	28,000	60,550
43A	Village Grove Estates Godfrey property Map HI parcel 184A, 186 324 @ 350	113,400	350	22,400	21,000	21,000	48,650
43B	Village Grove Estates 2394 Arlington St. 10 @ 350	3,500	350	3,150			
44	Reserved for future development						
45	Nutec Map HI Parcel 165 213 Leader Hts Rd	5,250	5,250				
46	Reserved for future development						

ATTACHMENT 2
YORK TOWNSHIP
PROJECTED CONNECTIONS TO York City
WASTEWATER TREATMENT PLANT

		Total Gallons	2013	2014	2015	2016	2017
47	First Fidelity Crestwood Arms 2135 Suburban Rd. 3 @ 350	1,050	350	700			
48	Reserved for future development						
49	James Ilyes 75 @ 350	26,250					26,250
50	Pasch/Dew Drop Map 3 parcel 109	3,000	1,400	1,600			
50A	Pasch/Nick's diner Map 3 parcels 66 & 67	3,000	3,000				
51	Misc Tap Ins	17,500	3,500	3,500	3,500	3,500	3,500
	TOTALS	639,650	77,100	206,550	81,700	72,950	201,350
(1)	Projects tributary to Spring Garden	700	350	350	0	0	0
(2)	Projects tributary to Marlborough Pump	136,250	10,800	95,200	9,100	14,700	6,450
(3)	Projects tributary to Joppa Road Pump	31,250	2,750	2,100	5,250	14,700	6,450
(4)	Projects tributary to Leader Heights	8,000	700	7,300	0	0	0
(5)	Projects tributary to Spangler Meadows	0	0	0	0	0	0
(6)	Projects tributary to Imperial Drive Pump	138,250	1,750	86,800	700	700	48,300
(7)	Projects tributary to Lentzlyn Drive Pump	0	0	0	0	0	0


Legend
York City
Municipal Boundary
Parcels
Lakes
SPRING GARDEN TOWNSHIP
SPRING GARDEN TOWNSHIP
YORK TOWNSHIP
York County, PA
2012
Chapter 94 Report
Projected Connections
To York City
Wastewater Treatment
Plant
N
W
E
S
0
1,000
2,000
4,000
Feet
York Township GIS

ATTACHMENT 4
YORK TOWNSHIP
TABULATION OF AVAILABLE SEWER RESERVE CAPACITY TO CITY OF YORK WWTP
[All flows are in units of gallons per day (gpd)]

Component	2012	2013	2014	2015	2016	2017
Existing Flow from Current Users (1)	1,433,808	1,433,808	1,510,908	1,717,458	1,799,158	1,872,108
Projected Flow Increase (2)	----	77,100	206,550	81,700	72,950	201,350
Total Estimated Wastewater Flows	1,433,808	1,510,908	1,717,458	1,799,158	1,872,108	2,073,458
Percent Usage	42.63%	44.93%	51.07%	53.50%	55.67%	61.66%
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	1,929,192	1,852,092	1,645,542	1,563,842	1,490,892	1,289,542

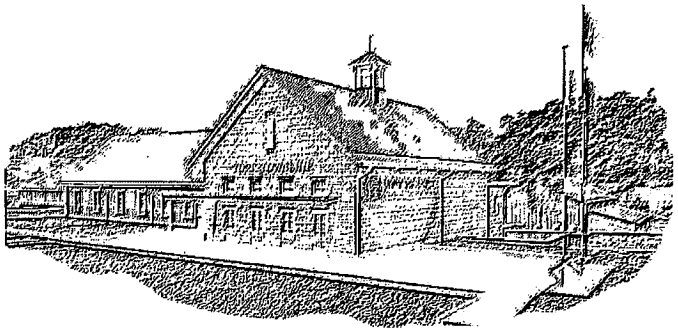
Notes:

(1) York City flow meter YT01 reading (1,713,200 gpd) less Spring Garden flow through YT01 (160,575 gpd) plus unmeterd York Township connections that flow into Spring Garden Township and are metered at SG01, SG02 and SG03 (39,799 gpd).

(2) From projected future connections (see Attachment 2).

(3) York Township currenct capacity in City of York WWTP.

YORK TOWNSHIP



190 Oak Road, Dallastown, Pennsylvania 17313 • Phone (717) 741-3861 • Fax (717) 741-5009

October 18, 2012

Pennsylvania Department of Environmental Protection
Southcentral Region Office
Clean Water Program
Attn: Sunil V. Desai
909 Elmerton Avenue
Harrisburg, PA 17110-8200

RE: Request for removal of the sewer tap ban for the Tyler Run Basin within York Township.

Dear Mr. Desai,

We are in receipt of the Department's letter to James Gross of York City Sewer Authority, dated June 21, 2012, approving the York City Chapter 94 report and prohibiting sewer taps to the Tyler Run interceptor.

On July 6, 2012 I sent Mr. Edward Corriveau of the Department a letter requesting an exception or removal of the connection ban for the area of the York Township tributary to the Tyler Run Interceptor that conveys flow from portions of York Township and Spring Garden Township into the York City flow metering manhole known as YT01(Tyler Run Basin). A copy of that letter is attached to this letter for reference (See Attachment A). Subsequent to that letter, I had a follow-up phone conversation with you where you had indicated to me that we were not eligible for an exception based on our request. You further indicated to me that if we go one year within the Tyler Run Basin with no recorded surcharging you would be agreeable to having the connection ban lifted.

In response to Mr. Corriveau's letter dated June 21, 2012 and in accordance with the requirements of Chapter 94, Municipal Wasteload Management, § 94.51, York Township is requesting removal of the connection ban for the area of York Township tributary to the Tyler Run Basin. The reasons for this request are as follows:

- York Townships Inflow & Infiltration (I&I) removal efforts identified in our July 6, 2012 letter. See Attachment A.

- The last recorded surcharge was on September 9, 2011. This was during the State of Emergency declared by the Pennsylvania Governor due to Hurricane Irene & Tropical Storm Lee. Local rainfall totals were over 17 inches over a 72-hour period. Monthly hydrographs from the York City flow metering manhole known as YT01 with rainfall data from September 2011 to September 2012 are attached (See Attachment B). The YT01 meter is located at the end of the Township's

Tyler Run Interceptor immediately before the interceptor's connection to the York City Sewer System. I have identified the significant rainfall events each month on the provided hydrographs. This data demonstrates that there been no surcharging for the previous 12 month period and it appears the hydraulic overloading has been eliminated. The highest recorded depth of flow within the Tyler Run Interceptor since the September 9, 2011 storm was during September 2012, when the Township experienced two storm events that produced over two-inches of precipitation each within a 15-day period. The second event produced 2.85 inches of precipitation and was about a 3-year frequency storm event. This event did not result in a surcharging at YT01.

- In addition to the I&I identification and removal program efforts as summarized on our July 6, 2012 letter (See Attachment A), the following subsequent efforts have been completed or have been scheduled :

  1. From the Tyler Run Interceptor televisual inspection 2,282 feet of interceptor were cleaned, root-cut if necessary and grouted.

  2. Televising of an additional 28,950 feet of sanitary sewers within the Tyler Run Basin has been completed for a total of 109,900 feet of sanitary sewers inspected in 2012 to date. Data from these inspections is being evaluated on an ongoing basis.

  3. Based on inspection evaluations, 1,589 feet of mains in the Tyler Run Basin have been scheduled for grouting starting the week of October 22, 2012.

  4. There were two external digs completed since May 2012 to repair defective and leaking sanitary sewer mains that could not be internally repaired.

  5. One internal point repair was completed.

  6. Ten runs for a total of 2,375 feet of sanitary sewer mains have been lined and 20 lateral have been re-established and grouted.

  7. On August 16, 2012, York Township staff met with Spring Garden Township staff and provided them copies of weir readings taken at night from their connection points to the Tyler Run Interceptor. Additionally, photos and reports of Spring Garden laterals with nighttime identified flow were provided to Spring Garden for follow-up.

  8. The York Township Official Sewage Facilities Plan (Act 537 Plan Update) that was approved by the Pennsylvania Department of Environmental Protection (DEP) in 1999 required York Township to conduct a detailed hydraulic modeling of the Tyler Run Interceptor to determine when portions of the Interceptor would need to be expanded. This model was completed in 1999 and then was updated in 2004. The 2004 model identified no immediate need to expand portions of the Tyler Run Interceptor. The Township is seeking a proposal from the Authority's

Engineer to update the 2004 hydraulic model with actual development and projected future flows from the Township's recently completed Land Use Assumptions Report and current flow metering data. This revised model will be used to determine if and when expansion of portions of the Tyler Run Interceptor will be needed. The hydraulic model update is anticipated to be completed in the first half of 2013. In addition to the hydraulic model update, the Township is requesting the Authority Engineer to provide a system improvement plan and prioritize the improvements to meet current and future system needs.

- The I&I identification and removal program is scheduled to continue.

It is for the above mentioned reasons and the rehabilitation efforts identified in our July 6, 2012 letter that York Township is seeking a removal of the connection ban in accordance with § 94.51 for the area of the York Township tributary to the Tyler Run Basin.

If you have any questions or would like to meet to discuss this request, please feel free to contact me at 717-741-3861 x133, the fax number above or via email at G.Milbrand@YorkTownship.com.

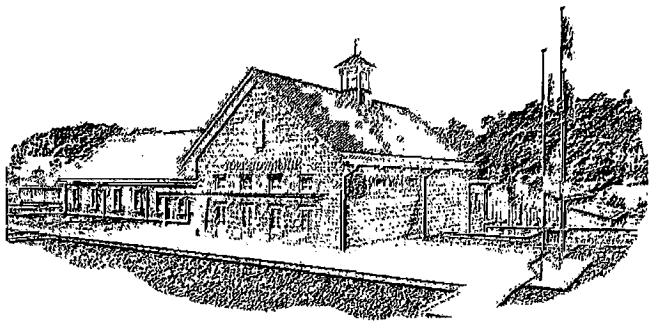
Sincerely,

Gary S. Milbrand P.E., CFM

Cc: Mark Malarich, P.E. – Gannett Fleming (Email)
Gregory Maust, P.E. – Spring Garden Township
James Gross – York City Sewer Authority
Elizabeth Heathcoat – York Township (Email)

Attachment A

YORK TOWNSHIP



190 Oak Road, Dallastown, Pennsylvania 17313 • Phone (717) 741-3861 • Fax (717) 741-5009

July 6, 2012

Pennsylvania Department of Environmental Protection
Southcentral Region Office
Attn: Edward J. Corriveau, P.E., Chief, Planning Section
909 Elmerton Avenue
Harrisburg, PA 17110-8200

RE: Request for Exception for Tyler Run Interceptor

Dear Mr. Corriveau,

We are in receipt of your letter to James Gross or York City Sewer Authority, dated June 21, 2012, approving the York City Chapter 94 report and prohibiting sewer taps to the Tyler Run interceptor.

In response to your letter and in accordance with the requirements of Chapter 94, Municipal Wasteload Management, § 94.51, York Township is requesting approval of an exception or removal to the connection ban for the area of York Township tributary to the Tyler Run Interceptor that conveys flow from portions of York Township and Spring Garden Township into the York City flow metering manhole known as YT01(Tyler Run Basin). The reasons for this request are as follows:

- With York Township's 2011 Municipal Wasterload Management Report which is integrated into York City's Chapter 94 report, it was identified that the Tyler Run Basin had three short periods in 2011 when the system surcharged due to major wet weather events. This report further went on to describe a Corrective Action Plan (CAP) that will be implemented by York Township. In May of this year per your staff's request, we provide a schedule for our CAP to cover the period from May 2012 through March 2013.

- Current CAP efforts are summarized as follows:

    1. Temporary flow monitoring - Due to the lack of precipitation events, the temporary flow monitoring that was scheduled for June and July 2012 has been rescheduled to this fall.

    2. Tyler Run Interceptor televisual inspection - The interceptor was inspected in May as identified in the CAP. A total of 10,900 feet of pipe was televised. The data from the inspection is currently being evaluated.

Attachment A

3. The Inflow & Infiltration (I&I) identification and removal program continues.

   a. Efforts conducted in 2011 once the limited surcharging became known to the York Township, included:

      i. Televising approximately 13,000 feet of sanitary sewers. Which resulted in the repair of a 6-inch sheared lateral that removed an estimated 30,000 GPD of I/I from the Tyler Run Basin.

      ii. Replaced two defective watertight frames and covers of manholes adjacent to Tyler Run Creek which were suspected of leaking I&I to the Tyler Run Interceptor during periods of high creek flows.

      iii. Grouting of several manholes that were found contributing I&I during the September 2011 State of Emergency flooding event was completed.

   It should be noted that there have been no surcharge events since all the above mentioned repairs have been completed.

   b. Current 2012 York Township I&I removal efforts to date, other than those previously mentioned, include:

      i. Televising of an additional 70,000 feet of sanitary sewers within the Tyler Run Basin has been completed. Data from these inspections is being evaluated on an ongoing basis.

      ii. Identified several defective laterals that have been scheduled to be repaired.

      iii. Repair of 12 degraded manholes identified in late 2011.

      iv. As a result of the ongoing evaluations, the township has scheduled the lining of 7 runs of sanitary sewer in the Tyler Run Basin. This work should be completed during the latter part of July or early August.

   c. I&I identification and removal program will continue as identified with our CAP.

4. The township is evaluating inspection data on an ongoing basis.

5. The township will report the results of items 1 thru 4 above with our 2012 Wasteload Management Report.

- The last recorded surcharge was on September 9, 2011. This was during the State of Emergency declared by the Pennsylvania Governor from Hurricane Irene & Tropical Storm Lee. Local rainfall totals were over 17 inches over a 72-hour period.

Attachment A

- Flow records from the York City permanent flow meter YT01 have indicated that no surcharging has occurred since the September 9, 2011 event thru May 2012. In fact, the data indicates that no flow levels exceeded 2/3 of the 18-inch diameter interceptor or about 50% of the carrying capacity of the pipe at YT01 for the period January thru May 2012. Accordingly, it appears the overload has been eliminated.

It is for the above mentioned reasons that York Township is seeking approval of an exception or removal to the connection ban in accordance with § 94.51 for the area of York Township tributary to the Tyler Run Basin.

If you have any questions or would like to meet to discuss this request, please feel free to contact me at 717-741-3861 x133, the fax number above or via email at G.Milbrand@YorkTownship.com.

Sincerely,

Gary S. Milbrand P.E., CFM

Cc: Sunil Desai – PA DEP
Mark Malarich, P.E. – Gannett Fleming
Gregory Maust, P.E. – Spring Garden Township
James Gross – York City Sewer Authority

pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION
CLEAN WATER PROGRAM

NOV 1 2012

Mr. Gary S. Milbrand
York Township
190 Oak Road
Dallastown, PA 17313

Re: Sewage
Tyler Run Interceptor/ 2011 Wasteload Management Report
York Township, York County

Dear Mr. Milbrand:

This is in response to your October 18, 2012 letter requesting the Department to remove the sewer tap prohibition in the area tributary to the York City flow metering manhole on Tyler Run interceptor.

Since the surcharging was reported in the Tyler Run interceptor, the Township TV inspected 109,900' of sewers. Based on the TV inspection data, sewer lines, manholes and laterals have repaired. The Township plans to evaluate inspection data on an ongoing basis. There has not been any surcharging since September 2011. This will again be confirmed in 2013 when the hydraulic model of the Tyler Run basin will be updated and rerun. We note that no surcharging was observed even during two rainfall events of greater than two inches in September 2012.

It appears that the work completed by the Township has eliminated surcharging in this interceptor. Based on the above, the Department will allow exemptions in the Tyler Run Basin.

Your 2011 Chapter 94 Report is hereby approved.

We appreciate your cooperation in meeting the Municipal Wasteload Management Program requirements to insure your community maintains wastewater capacity to meet your future needs.

If you have any questions, please call Sunil Desai 717.705.4767.

Sincerely,

Edward J Corriveau, P.E.
Chief, Planning Section
Clean Water Program

cc: York City Sewer Authority
York Township
Spring Garden Township

Printed on Recycled Paper

Tropical Storm Lee and Hurricane Sandy Flow Meter Data

For the Period of September 7 to 8, 2011 (Lee - 7.21" of rain)
For the Period of October 29 to 30, 2012 (Sandy - 5.29" of rain)
All Flows are in MGD

Meter	Meter Description	2011 Average Daily Flow	Tropical Storm Lee Average Two Day	Tropical Storm Lee Peak Flows	Peaking Factor	Hurricane Sandy Average Two Day	Hurricane Sandy Peak Flows	Peaking Factor
WWTP	Wastewater Treatment Plant	12.62	60.80	73.60	5.83	40.04	72.00	5.71
LTM01	Meters the Willis Run Interceptor	2.79	12.04	15.74	5.64	7.27	11.50	4.12
LTM02	Meters the Codorus Creek Interceptor	6.06	22.70	33.09	5.46	15.90	27.68	4.57
LTM03	Meters the Arch Street Interceptor	0.58	3.21	9.16	15.79	1.99	4.94	8.51
LTM04	Meters the Poorhouse Run Interceptor	2.41	N/A*	N/A*	N/A*	6.32	9.58	3.97
MN01	Manchester Township Meter	1.06	3.54	4.25	4.01	2.97	4.24	4.00
MN02	Manchester Township Meter	0.07	0.40	1.09	15.57	0.24	0.61	8.67
MN03	Manchester Township Meter	0.08	0.32	0.58	7.25	0.28	0.44	5.53
NY01	North York Meter	0.12	1.32	2.46	20.50	0.39	1.00	8.29
RI01	Richland Avenue Meter	0.18	1.07	1.50	8.33	0.64	6.84	38.00
SG01	Spring Garden Township Meter	0.46	2.23	4.65	10.11	1.21	4.29	9.32
SG02A	Spring Garden Township Meter	0.40	1.22	2.48	6.20	1.14	1.96	4.91
SG03	Spring Garden Township Meter	0.31	1.40	2.07	6.68	0.92	1.85	5.98
WM01	West Manchester Township Meter	1.80	6.36	12.66	7.03	3.27	5.49	3.05
WY01	West York Borough Meter	1.35	5.66	7.73	5.73	3.67	6.43	4.77
YC01	York City Meter	0.32	1.32	2.21	6.91	0.68	1.14	3.57
YT01	York Township Meter	1.72	7.05	8.77	5.10	3.38	4.28	2.49

*LTM04 data not available during Tropical Storm Lee due to construction on the Poorhouse Run Interceptor

Appendix I
York City Wastewater Treatment Facility Influent Meter Certifications of Calibration

Control Systems 21
725 N. US Hwy. 15
Dillsburg, PA 17019
Voice: 717 432-5511
Fax: 717 432-7550
email@controlsystems21.com

INSTRUMENT CALIBRATION REPORT

YWWTP

Instrument ID YP-023
Description Influent Flowmeter @ Headworks
Calibrated 3/25/2011

Manufacturer Milltronics
Model Number MultiRanger
Serial Number N/A
Location Plant
Building Headworks
Department N/A
Equipment ID N/A

Frequency 6 Months
Status Active
Calibration Type Scheduled
Document ID N/A
Next Due Date 09/30/11
Temp °F 71
Cal Proc 4.8

Calibration Specifications

Group # 1
Group Name Flow Meter
Stated Accy Pct of Range

Range Acc % 5.0000
Reading Acc % 0.0000
Plus/Minus 0.00

Nom In Val / In Val	In Type	Out Val	Out Type	Fnd As	Lft As	Dev%	Pass/Fail
0.00 / 11.92	MGD	11.92	MGD	12.00	12.00	0.67%	Pass

Test Instruments Used During the Calibration

Test Instrument ID	Description	Manufacturer	Model Number	Serial Number	(As Of Cal Entry Date) Last Cal Date	Next Cal Date
ISCO	Isco Flow Book	Isco Flow Book	N/A	N/A		
M-008	Tape Measure	Klein Tools	916 30RE	N/A		4/30/2011

Notes about this calibration

Equipment listed on the attached calibration worksheets are 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 to the National Institute of Standards and Technology (NIST), or has been derived from accepted values of natural physical constants.

Control Systems 21 utilizes the comparison method of calibration, where applicable a calibration uncertainty ratio of 4:1 is maintained.

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.*

Calibration Result Calibration Successful
Who Calibrated Eric Selak
Finalized By Sam Hackenberger, Quality Manager
Date Finalized 4/20/2011 3:20:50PM

Control Systems 21

"Your Process Control Specialists"

CERTIFICATE of CALIBRATION

Cal Certificate # 12134

Company Name YWWTP
Instrument ID **YP-023**

Description	Influent Flowmeter @ Headworks	**Status**	Active
Manufacturer	Milltronics	**Temp °F**	70
Model Number	MultiRanger	**Cal Proc**	4.8
Serial Number	N/A	**Adjusted To Improve**	No
Location	Plant	**Calibration Frequency**	6 Months
Building	Headworks	**Calibrated**	08/31/2012
Department	N/A	**Next Due Date**	03/31/2013

Calibration Specifications

Group Name Flow Meter

Test Point	Ref Standard	Tol	UUT As Found	P/F	UUT As Left	P/F	Dev
1	60.18 MGD	+3.70/-3.69	60.02 MGD	P	60.02 MGD	P	-0.16

Calibration Standards Used

Test Instrument ID	Manufacturer	Model Number	Serial Number	Next Cal Date
ISCO	Isco Flow Book	N/A	N/A	
M-009	Stanley	30-812	N/A	4/30/2013

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: Sam Hackenberger 24 September 2012 4:02:25PM
Quality Manager

Control Systems 21
713 Range End Rd. • Dillsburg, PA 17019 • Voice: 717 432-5511 • Fax: 717 432-7550
email@controlsystems21.com

Appendix J
York City WWTP NPDES Quarterly Local Limits Analyses, Annual Priority Pollutant Scan, Semimonthly Sludge Results

PENN STATE

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: E15078
Date Received: January 6, 2012
Date Sampled: 1/5/12
Report Date: 1/26/12
Sample type: Composite
County: York
Customer Sample ID: Centrifuge Cake

RESULTS

pH @ 21.6 C	Solids	Volatile	Tot-N	Org-N	NH_4N	P	K	Mg	Ca	Na	Fe	Al
	— % —					% (dry weight basis)						
7.9	18.11	79.84	6.46	5.70	0.76	2.05	0.36	0.34	3.38	0.05	0.91	0.38

Mn	As	Cd	Cr	Cu	Pb	Hg	Mo	Ni	Se	Zn	PCB[1]	Reactive CN
						mg/kg (dry weight basis)						
274.8	2.87	2.07	21.8	378.6	51.3	0.87	17.7	17.8	7.92	550.0	< .15	< 1

NR-Not Requested

One dry ton of this material is equivalent to 1324 gallons of wet material or 5.5 tons of wet material

PRIMARY NUTRIENT CONTENT

	% (dry wt basis)		
Total N	6.46	0.77	dry tons of this biosolid will supply 100 lbs of total N.
P_2O_5	4.69	2.44	dry tons of this biosolid will supply 100 lbs of P
K_2O	0.43		

ANALYSIS INFORMATION FOR EPA 503 POLLUTANTS

Analyte	EPA SW-846 Method	Analyst	Date	Time
Cd,Cu,Mo,Pb,Ni,Zn	3050B + 6010	Brooks	1/13/2012	9:52:49
As	3050B + 6010	Brooks	1/13/2012	9:52:49
Se	3050B + 6010	Brooks	1/13/2012	9:52:49
Hg	7473	Brooks	1/12/2012	12:59:30 PM
PCB1	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)	2.083	2.083	2.083	0.360	2.083	2.083	2.083	2.083	2.083
Analyte conc. in sample/ digest (mg/L except Hg)	0.022	0.016	2.86	0.056 ug	0.13	0.13	0.39	0.06	4.15
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:	Sample Receipt
< 2.71					

PENN STATE

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

Biosolids Analysis Report

Joseph Concino
City of York - WWTP
1701 Black Bridge Rd
York PA 17402

Lab Sample ID: E15078
Date Received: January 6, 2012
Date Sampled: 1/5/12
County: York
Customer Sample ID: Centrifuge Cake

RESULTS (Dry Weight Basis)

Parameter Analyzed		Result	Units	Sample Detection Limit
pH		7.90	—	—
Solids		18.11	%	—
Total Phosphorus		20,491	mg/kg	33.14
Total Potassium		3,604	mg/kg	66.29
Total Combustion Nitrogen		6.46	%	-
Ammonium Nitrogen		0.76	%	0.01
Nitrate	<	2.71	mg/kg	2.71
Cadmium		2.07	mg/kg	0.66
Copper		378.6	mg/kg	1.99
Nickel		17.8	mg/kg	1.33
Lead		51.3	mg/kg	3.31
Zinc		550.0	mg/kg	6.63
Mercury		0.87	mg/kg	0.02
Arsenic		2.87	mg/kg	1.99
Molybdenum		17.71	mg/kg	1.99
Selenium		7.92	mg/kg	3.31
PCBs		< .15	mg/kg	0.15

PENN STATE

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: E15193
Date Received: March 2, 2012
Date Sampled: 3/1/12
Report Date: 3/20/12
Sample type: Composite
County: York
Customer Sample ID: Centrifuge Cake

RESULTS

pH @ 21.1 C	Solids	Volatile	Tot-N	Org-N	NH_4N	P	K	Mg	Ca	Na	Fe	Al
	— % —					% (dry weight basis)						
7.8	18.76	83.04	6.31	5.64	0.66	1.77	0.52	0.46	3.04	0.05	0.68	0.29

Mn	As	Cd	Cr	Cu	Pb	Hg	Mo	Ni	Se	Zn	PCB[1]	Reactive CN
						mg/kg (dry weight basis)						
181.5	2.78	1.92	16.7	326.1	40.0	1.33	14.8	15.7	6.01	449.4	< .14	< 1

NR-Not Requested One dry ton of this material is equivalent to 1278 gallons of wet material or 5.3 tons of wet material

PRIMARY NUTRIENT CONTENT

	% (dry wt basis)		
Total N	6.31	0.79	dry tons of this biosolid will supply 100 lbs of total N.
P_2O_5	4.05	2.83	dry tons of this biosolid will supply 100 lbs of P
K_2O	0.63		

ANALYSIS INFORMATION FOR EPA 503 POLLUTANTS

Analyte	EPA SW-846 Method	Analyst	Date	Time
Cd,Cu,Mo,Pb,Ni,Zn	3050B + 6010	Brooks	3/9/2012	9:47:38
As	3050B + 6010	Brooks	3/9/2012	9:47:38
Se	3050B + 6010	Brooks	3/9/2012	9:47:38
Hg	7473	Brooks	3/9/2012	11:57:29 AM
PCB1	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)	1.773	1.773	1.773	0.437	1.773	1.773	1.773	1.773	1.773
Analyte conc. in sample/ digest (mg/L except Hg)	0.018	0.013	2.17	0.109 ug	0.10	0.10	0.27	0.04	2.99
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					Sample Receipt
Nitrate-N (mg/kg)	Total Carbon (%)	CCE Calcium Carbonate Equivalent (%)	Soluble Salts (mmhos/cm)	Other:	
4.67					

PENN STATE

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

Biosolids Analysis Report

Joseph Concino
City of York - WWTP
1701 Black Bridge Rd
York PA 17402

Lab Sample ID: E15193
Date Received: March 2, 2012
Date Sampled: 3/1/12
County: York
Customer Sample ID: Centrifuge Cake

RESULTS (Dry Weight Basis)

Parameter Analyzed	Result	Units	Sample Detection Limit
pH	7.81	—	—
Solids	18.76	%	—
Total Phosphorus	17,666	mg/kg	37.58
Total Potassium	5,226	mg/kg	75.17
Total Combustion Nitrogen	6.31	%	-
Ammonium Nitrogen	0.66	%	0.01
Nitrate	4.67	mg/kg	2.60
Cadmium	1.92	mg/kg	0.75
Copper	326.1	mg/kg	2.25
Nickel	15.7	mg/kg	1.50
Lead	40.0	mg/kg	3.76
Zinc	449.4	mg/kg	7.52
Mercury	1.33	mg/kg	0.01
Arsenic	2.78	mg/kg	2.25
Molybdenum	14.84	mg/kg	2.25
Selenium	6.01	mg/kg	3.76
PCBs	< .14	mg/kg	0.14

PENN STATE

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: E15290
Date Received: May 9, 2012
Date Sampled: 5/7/12
Report Date: 6/1/12
Sample type: Composite
County: York
Customer Sample ID: Centrifuge Cake

RESULTS

pH	Solids	Volatile	Tot-N	Org-N	NH_4N	P	K	Mg	Ca	Na	Fe	Al
@ 22.5 C	— % —					% (dry weight basis)						
8.1	13.51	79.28	8.26	7.03	1.23	2.51	0.27	0.40	4.20	0.08	1.01	0.43

Mn	As	Cd	Cr	Cu	Pb	Hg	Mo	Ni	Se	Zn	PCB[1]	Reactive CN
					mg/kg (dry weight basis)							
271.8	4.03	3.16	26.8	517.8	64.2	0.90	24.4	26.0	6.41	711.4	< .2	< 1

NR-Not Requested One dry ton of this material is equivalent to 1775 gallons of wet material or 7.4 tons of wet material

PRIMARY NUTRIENT CONTENT

	% (dry wt basis)		
Total N	8.26	0.61	dry tons of this biosolid will supply 100 lbs of total N.
P_2O_5	5.75	1.99	dry tons of this biosolid will supply 100 lbs of P
K_2O	0.32		

ANALYSIS INFORMATION FOR EPA 503 POLLUTANTS

Analyte	EPA SW-846 Method	Analyst	Date	Time
Cd,Cu,Mo,Pb,Ni,Zn	3050B + 6010	Brooks	5/21/2012	9:33:42
As	3050B + 6010	Brooks	5/21/2012	9:33:42
Se	3050B + 6010	Brooks	5/21/2012	9:33:42
Hg	7473	Rishel	5/16/2012	9:40:09 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)	2.002	2.002	2.002	0.295	2.002	2.002	2.002	2.002	2.002
Analyte conc. in sample/ digest (mg/L except Hg)	0.022	0.017	2.80	0.036 ug	0.13	0.14	0.35	0.03	3.85
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					Sample Receipt
Nitrate-N (mg/kg)	Total Carbon (%)	CCE Calcium Carbonate Equivalent (%)	Soluble Salts (mmhos/cm)	Other:	
5.08					

PENN STATE

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

Biosolids Analysis Report

Joseph Concino
City of York - WWTP
1701 Black Bridge Rd
York PA 17402

Lab Sample ID: E15290
Date Received: May 9, 2012
Date Sampled: 5/7/12
County: York
Customer Sample ID: Centrifuge Cake

RESULTS (Dry Weight Basis)

Parameter Analyzed	Result	Units	Sample Detection Limit
pH	8.10	—	—
Solids	13.51	%	—
Total Phosphorus	25,123	mg/kg	46.22
Total Potassium	2,680	mg/kg	92.44
Total Combustion Nitrogen	8.26	%	-
Ammonium Nitrogen	1.23	%	0.01
Nitrate	5.08	mg/kg	1.45
Cadmium	3.16	mg/kg	0.92
Copper	517.8	mg/kg	2.77
Nickel	26.0	mg/kg	1.85
Lead	64.2	mg/kg	4.62
Zinc	711.4	mg/kg	9.24
Mercury	0.90	mg/kg	0.03
Arsenic	4.03	mg/kg	2.77
Molybdenum	24.42	mg/kg	2.77
Selenium	6.41	mg/kg	4.62
PCBs	< .2	mg/kg	0.20

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: E15365
Date Received: July 3, 2012
Date Sampled: 7/2/12
Report Date: 7/24/12
Sample type: Composite
County: York
Customer Sample ID: Centrifuge Cake

RESULTS

pH	Solids	Volatile	Tot-N	Org-N	NH_4N	P	K	Mg	Ca	Na	Fe	Al
@ 22.9 C	— % —	% (dry weight basis)										
8.1	14.65	78.05	7.76	6.78	0.98	2.29	0.23	0.43	3.19	0.09	0.93	0.37

Mn	As	Cd	Cr	Cu	Pb	Hg	Mo	Ni	Se	Zn	PCB[1]	Reactive CN
mg/kg (dry weight basis)												
224.7	< 2.87	2.77	23.3	464.6	82.2	1.74	24.0	24.8	7.35	684.0	< .18	< 1

NR-Not Requested One dry ton of this material is equivalent to 1637 gallons of wet material or 6.8 tons of wet material

PRIMARY NUTRIENT CONTENT

	% (dry wt basis)		
Total N	7.76	0.64	dry tons of this biosolid will supply 100 lbs of total N.
P_2O_5	5.25	2.18	dry tons of this biosolid will supply 100 lbs of P
K_2O	0.28		

ANALYSIS INFORMATION FOR EPA 503 POLLUTANTS

Analyte	EPA SW-846 Method	Analyst	Date	Time
Cd,Cu,Mo,Pb,Ni,Zn	3050B + 6010	Brooks	7/13/2012	10:14:13
As	3050B + 6010	Brooks	7/13/2012	10:14:13
Se	3050B + 6010	Brooks	7/13/2012	10:14:13
Hg	7473	Brooks	7/17/2012	1:32:02 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)	1.785	1.785	1.785	0.475	1.785	1.785	1.785	1.785	1.785
Analyte conc. in sample/ digest (mg/L except Hg)	0.013	0.014	2.43	0.121 ug	0.13	0.13	0.43	0.04	3.58
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					Sample Receipt
Nitrate-N (mg/kg)	Total Carbon (%)	CCE Calcium Carbonate Equivalent (%)	Soluble Salts (mmhos/cm)	Other:	
6.61					

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

Biosolids Analysis Report

Joseph Concino
City of York - WWTP
1701 Black Bridge Rd
York PA 17402

Lab Sample ID: E15365
Date Received: July 3, 2012
Date Sampled: 7/2/12
County: York
Customer Sample ID: Centrifuge Cake

RESULTS (Dry Weight Basis)

Parameter Analyzed		Result	Units	Sample Detection Limit
pH		8.07	—	—
Solids		14.65	%	—
Total Phosphorus		22,907	mg/kg	47.80
Total Potassium		2,304	mg/kg	95.60
Total Combustion Nitrogen		7.76	%	-
Ammonium Nitrogen		0.98	%	0.01
Nitrate		6.61	mg/kg	1.32
Cadmium		2.77	mg/kg	0.96
Copper		464.6	mg/kg	2.87
Nickel		24.8	mg/kg	1.91
Lead		82.2	mg/kg	4.78
Zinc		684.0	mg/kg	9.56
Mercury		1.74	mg/kg	0.01
Arsenic	<	2.87	mg/kg	2.87
Molybdenum		23.97	mg/kg	2.87
Selenium		7.35	mg/kg	4.78
PCBs		< .18	mg/kg	0.18

PENN STATE

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: E15447
Date Received: September 5, 2012
Date Sampled: 9/3/12
Report Date: 10/8/12
Sample type: Composite
County: York
Customer Sample ID: Centrifuge Cake

RESULTS

pH	Solids	Volatile	Tot-N	Org-N	NH_4N	P	K	Mg	Ca	Na	Fe	Al
@ 22.3 C	— % —	% (dry weight basis)										
8.3	15.35	77.03	7.32	6.39	0.93	2.31	0.20	0.43	3.51	0.08	1.06	0.43

Mn	As	Cd	Cr	Cu	Pb	Hg	Mo	Ni	Se	Zn	PCB[1]	Reactive CN
mg/kg (dry weight basis)												
255.0	3.29	2.69	22.6	516.8	91.5	0.83	24.0	22.0	7.55	793.3	< .18	< 1

NR-Not Requested One dry ton of this material is equivalent to 1563 gallons of wet material or 6.5 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	5.30	2.16	dry tons of this biosolid will supply 100 lbs of P
K_2O	0.25		

ANALYSIS INFORMATION FOR EPA 503 POLLUTANTS

Analyte	EPA SW-846 Method	Analyst	Date	Time
Cd,Cu,Mo,Pb,Ni,Zn	3050B + 6010	Brooks	9/17/2012	12:35:25
As	3050B + 6010	Brooks	9/17/2012	12:35:25
Se	3050B + 6010	Brooks	9/17/2012	12:35:25
Hg	7473	Brooks	9/13/2012	12:11:29 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)	1.665	1.665	1.665	0.361	1.665	1.665	1.665	1.665	1.665
Analyte conc. in sample/ digest (mg/L except Hg)	0.017	0.014	2.64	0.046 ug	0.12	0.11	0.47	0.04	4.05
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:
5.63				

Sample Receipt

PENN STATE

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

Biosolids Analysis Report

Joseph Concino
City of York - WWTP
1701 Black Bridge Rd
York PA 17402

Lab Sample ID: E15447
Date Received: September 5, 2012
Date Sampled: 9/3/12
County: York
Customer Sample ID: Centrifuge Cake

RESULTS (Dry Weight Basis)

Parameter Analyzed	Result	Units	Sample Detection Limit
pH	8.26	—	—
Solids	15.35	%	—
Total Phosphorus	23,141	mg/kg	48.92
Total Potassium	2,043	mg/kg	97.85
Total Combustion Nitrogen	7.32	%	-
Ammonium Nitrogen	0.93	%	0.02
Nitrate	5.63	mg/kg	3.89
Cadmium	2.69	mg/kg	0.98
Copper	516.8	mg/kg	2.94
Nickel	22.0	mg/kg	1.96
Lead	91.5	mg/kg	4.89
Zinc	793.3	mg/kg	9.78
Mercury	0.83	mg/kg	0.02
Arsenic	3.29	mg/kg	2.94
Molybdenum	24.01	mg/kg	2.94
Selenium	7.55	mg/kg	4.89
PCBs	< .18	mg/kg	0.18

PENN STATE

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: E15567
Date Received: November 9, 2012
Date Sampled: 11/8/12
Report Date: 11/26/12
Sample type: Composite
County: York
Customer Sample ID: Centrifuge Cake

RESULTS

pH	Solids	Volatile	Tot-N	Org-N	NH_4N	P	K	Mg	Ca	Na	Fe	Al
@ 21.4 C	— % —					% (dry weight basis)						
7.9	18.25	82.61	6.45	5.82	0.63	2.25	0.53	0.41	3.66	0.07	1.01	0.40

Mn	As	Cd	Cr	Cu	Pb	Hg	Mo	Ni	Se	Zn	PCB[1]	Reactive CN
					mg/kg (dry weight basis)							
248.2	3.43	2.28	22.2	489.4	83.8	1.02	21.2	21.4	6.18	710.1	< .15	< 1

NR-Not Requested One dry ton of this material is equivalent to 1314 gallons of wet material or 5.5 tons of wet material

PRIMARY NUTRIENT CONTENT

	% (dry wt basis)		
Total N	6.45	0.77	dry tons of this biosolid will supply 100 lbs of total N.
P_2O_5	5.15	2.23	dry tons of this biosolid will supply 100 lbs of P
K_2O	0.63		

ANALYSIS INFORMATION FOR EPA 503 POLLUTANTS

Analyte	EPA SW-846 Method	Analyst	Date	Time
Cd,Cu,Mo,Pb,Ni,Zn	3050B + 6010	Brooks	11/16/2012	10:43:16
As	3050B + 6010	Brooks	11/16/2012	10:43:16
Se	3050B + 6010	Brooks	11/16/2012	10:43:16
Hg	7473	Rishel	11/14/2012	2:26:40 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)	2.352	2.352	2.352	0.273	2.352	2.352	2.352	2.352	2.352
Analyte conc. in sample/ digest (mg/L except Hg)	0.029	0.020	4.20	0.051 ug	0.18	0.18	0.72	0.05	6.10
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					Sample Receipt
Nitrate-N (mg/kg)	Total Carbon (%)	CCE Calcium Carbonate Equivalent (%)	Soluble Salts (mmhos/cm)	Other:	
< 3.51					

PENN STATE

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

Biosolids Analysis Report

Joseph Concino
City of York - WWTP
1701 Black Bridge Rd
York PA 17402

Lab Sample ID: E15567
Date Received: November 9, 2012
Date Sampled: 11/8/12
County: York
Customer Sample ID: Centrifuge Cake

RESULTS (Dry Weight Basis)

Parameter Analyzed		Result	Units	Sample Detection Limit
pH		7.86	—	—
Solids		18.25	%	—
Total Phosphorus		22,468	mg/kg	29.12
Total Potassium		5,271	mg/kg	58.24
Total Combustion Nitrogen		6.45	%	-
Ammonium Nitrogen		0.63	%	0.01
Nitrate	<	3.51	mg/kg	3.51
Cadmium		2.28	mg/kg	0.58
Copper		489.4	mg/kg	1.75
Nickel		21.4	mg/kg	1.16
Lead		83.8	mg/kg	2.91
Zinc		710.1	mg/kg	5.82
Mercury		1.02	mg/kg	0.02
Arsenic		3.43	mg/kg	1.75
Molybdenum		21.23	mg/kg	1.75
Selenium		6.18	mg/kg	2.91
PCBs		< .15	mg/kg	0.15

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: CT PH-0224 , DE ID 11 , GA 914 , MA PA0102 , MD 128 , LA 04162 , VA 421 , WY EPA Region 8 , WV 343

February 14, 2012

2/14/12

Mr. Joe Concino
York, City of (WWTP)
1701 Blackridge Road
York, PA 17405

Certificate of Analysis

Project Name:	PP SCANS AND LOCAL LIMITS -	Workorder:	9950128
Purchase Order:	12-100191	Workorder ID:	Local Limits

Dear Mr. Concino,

Enclosed are the analytical results for samples received by the laboratory on Thursday, February 02, 2012.

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 Shannon Butler (Project Coordinator) or Anna G Milliken (Technical Manager) at (717) 944-5541.

Please visit us at www.analyticallab.com for a listing of ALS' NELAP accreditations and Scope of Work, as well as other links to Water Quality documentation on the internet.

This laboratory report may not be reproduced, except in full, without the written approval of ALS Environmental.

This page is included as part of the Analytical Report and must be retained as a permanent record thereof.

Anna G Milliken
Technical Manager

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: CT PH-0224 , DE ID 11 , GA 914 , MA PA0102 , MD 128 , LA 04162 , VA 421 , WY EPA Region 8 , WV 343

SAMPLE SUMMARY

Workorder: 9950128 Local Limits

Discard Date: 02/28/2012

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
9950128001	Raw Influent	Waste Water	2/1/12 00:00	2/2/12 16:40	Customer
9950128002	002 Effluent	Waste Water	2/1/12 00:00	2/2/12 16:40	Customer
9950128003	Raw Influent	Waste Water	2/1/12 13:37	2/2/12 16:40	Customer
9950128004	002 Effluent	Waste Water	2/1/12 13:45	2/2/12 16:40	Customer
9950128005	Centrifuge Cake	Solid	2/2/12 07:30	2/2/12 16:40	Customer

Workorder Comments:

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.

Standard Acronyms/Flags

J, B	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

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: CT PH-0224 , DE ID 11 , GA 914 , MA PA0102 , MD 128 , LA 04162 , VA 421 , WY EPA Region 8 , WV 343

ANALYTICAL RESULTS

Workorder: 9950128 Local Limits

Lab ID: **9950128001** Date Collected: 2/1/2012 00:00 Matrix: Waste Water

Sample ID: **Raw Influent** Date Received: 2/2/2012 16:40

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
WET CHEMISTRY										
Cyanide, Total	ND		mg/L	0.0050	EPA 335.4	2/8/12	JEP	2/8/12 13:26	JEP	A
METALS										
Arsenic, Total	ND		mg/L	0.0050	EPA 200.7	2/8/12	KMK	2/13/12 10:36	JWK	B3
Cadmium, Total	ND		mg/L	0.0010	EPA 200.7	2/8/12	KMK	2/13/12 10:36	JWK	B3
Chromium, Total	0.0024		mg/L	0.0010	EPA 200.8	2/6/12	KMK	2/6/12 13:15	MW	B1
Copper, Total	0.050		mg/L	0.0050	EPA 200.7	2/8/12	KMK	2/13/12 10:36	JWK	B3
Lead, Total	0.0073		mg/L	0.0030	EPA 200.7	2/8/12	KMK	2/13/12 10:36	JWK	B3
Mercury, Total	ND		mg/L	0.00050	EPA 245.1	2/8/12	MNP	2/8/12 12:13	MNP	B2
Molybdenum, Total	0.022		mg/L	0.010	EPA 200.7	2/8/12	KMK	2/13/12 10:36	JWK	B3
Nickel, Total	0.0031		mg/L	0.0025	EPA 200.8	2/6/12	KMK	2/6/12 16:07	MW	B1
Selenium, Total	0.0058		mg/L	0.0020	EPA 200.8	2/6/12	KMK	2/6/12 13:15	MW	B1
Silver, Total	0.0014		mg/L	0.0010	EPA 200.8	2/6/12	KMK	2/6/12 13:15	MW	B1
Zinc, Total	0.11		mg/L	0.010	EPA 200.7	2/8/12	KMK	2/13/12 10:36	JWK	B3

Sample Comments:

Anna G Milliken
Technical Manager

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: CT PH-0224 , DE ID 11 , GA 914 , MA PA0102 , MD 128 , LA 04162 , VA 421 , WY EPA Region 8 , WV 343

ANALYTICAL RESULTS

Workorder: 9950128 Local Limits

Lab ID: **9950128002** Date Collected: 2/1/2012 00:00 Matrix: Waste Water

Sample ID: **002 Effluent** Date Received: 2/2/2012 16:40

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
WET CHEMISTRY										
Cyanide, Total	ND		mg/L	0.0050	EPA 335.4	2/8/12	JEP	2/8/12 13:26	JEP	A
METALS										
Arsenic, Total	ND		mg/L	0.0050	EPA 200.7	2/8/12	KMK	2/13/12 10:49	JWK	B3
Cadmium, Total	ND		mg/L	0.0010	EPA 200.7	2/8/12	KMK	2/13/12 10:49	JWK	B3
Chromium, Total	ND		mg/L	0.0010	EPA 200.8	2/6/12	KMK	2/6/12 16:09	MWO	B1
Copper, Total	ND		mg/L	0.0050	EPA 200.7	2/8/12	KMK	2/13/12 10:49	JWK	B3
Lead, Total	ND		mg/L	0.0030	EPA 200.7	2/8/12	KMK	2/13/12 10:49	JWK	B3
Mercury, Total	ND		mg/L	0.00050	EPA 245.1	2/8/12	MNP	2/8/12 12:14	MNP	B2
Molybdenum, Total	0.021		mg/L	0.010	EPA 200.7	2/8/12	KMK	2/13/12 10:49	JWK	B3
Nickel, Total	ND		mg/L	0.0025	EPA 200.8	2/6/12	KMK	2/6/12 16:09	MWO	B1
Selenium, Total	ND		mg/L	0.0020	EPA 200.8	2/6/12	KMK	2/6/12 16:09	MWO	B1
Silver, Total	ND		mg/L	0.0010	EPA 200.8	2/6/12	KMK	2/6/12 13:18	MWO	B1
Zinc, Total	0.037		mg/L	0.010	EPA 200.7	2/8/12	KMK	2/13/12 10:49	JWK	B3

Sample Comments:

Anna G Milliken
Technical Manager

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: CT PH-0224 , DE ID 11 , GA 914 , MA PA0102 , MD 128 , LA 04162 , VA 421 , WY EPA Region 8 , WV 343

ANALYTICAL RESULTS

Workorder: 9950128 Local Limits

Lab ID: **9950128003** Date Collected: 2/1/2012 13:37 Matrix: Waste Water

Sample ID: **Raw Influent** Date Received: 2/2/2012 16:40

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
WET CHEMISTRY										
Oil/Grease Hexane Extractable	39.3		mg/L	2.5	EPA 1664A			2/14/12 00:00	JJS	A

Sample Comments:

Anna G Milliken
Technical Manager

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: CT PH-0224 , DE ID 11 , GA 914 , MA PA0102 , MD 128 , LA 04162 , VA 421 , WY EPA Region 8 , WV 343

ANALYTICAL RESULTS

Workorder: 9950128 Local Limits

Lab ID: **9950128004** Date Collected: 2/1/2012 13:45 Matrix: Waste Water

Sample ID: **002 Effluent** Date Received: 2/2/2012 16:40

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
WET CHEMISTRY										
Oil/Grease Hexane Extractable	2.4		mg/L	2.2	EPA 1664A			2/14/12 00:00	JJS	A

Sample Comments:

Anna G Milliken
Technical Manager

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: CT PH-0224 , DE ID 11 , GA 914 , MA PA0102 , MD 128 , LA 04162 , VA 421 , WY EPA Region 8 , WV 343

ANALYTICAL RESULTS

Workorder: 9950128 Local Limits

Lab ID: **9950128005** Date Collected: 2/2/2012 07:30 Matrix: Solid

Sample ID: **Centrifuge Cake** Date Received: 2/2/2012 16:40

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
WET CHEMISTRY										
Cyanide, Total	ND		mg/kg	1.6	SW846 9012B	2/7/12	JEP	2/7/12 15:41	JEP	A
Hexane Extractable Material	27700		mg/kg	1260	SW846 9071B			2/13/12 12:09	KJD	A
Moisture	84.2		%	0.1	SM20-2540 G			2/3/12 11:25	KAK	A
Silica Gel Treated HEM	12700		mg/kg	1260	SW846 9071B			2/13/12 12:09	KJD	A
Total Solids	15.8		%	0.1	SM20-2540 G			2/3/12 11:25	KAK	A
METALS										
Arsenic, Total	ND		mg/kg	11.9	SW846 6010C	2/6/12	KMK	2/7/12 03:17	KMH	A1
Cadmium, Total	ND		mg/kg	3.0	SW846 6010C	2/6/12	KMK	2/7/12 03:17	KMH	A1
Chromium, Total	29.1		mg/kg	6.0	SW846 6010C	2/6/12	KMK	2/7/12 03:17	KMH	A1
Copper, Total	426		mg/kg	11.9	SW846 6010C	2/6/12	KMK	2/7/12 03:17	KMH	A1
Lead, Total	53.4		mg/kg	11.9	SW846 6010C	2/6/12	KMK	2/7/12 03:17	KMH	A1
Mercury, Total	ND		mg/kg	1.1	SW846 7471B	2/9/12	MNP	2/9/12 12:55	MNP	A2
Molybdenum, Total	20.3		mg/kg	11.9	SW846 6010C	2/6/12	KMK	2/7/12 03:17	KMH	A1
Nickel, Total	25.4		mg/kg	11.9	SW846 6010C	2/6/12	KMK	2/7/12 03:17	KMH	A1
Selenium, Total	ND		mg/kg	29.9	SW846 6010C	2/6/12	KMK	2/7/12 03:17	KMH	A1
Silver, Total	12.6		mg/kg	3.0	SW846 6010C	2/6/12	KMK	2/7/12 03:17	KMH	A1
Zinc, Total	606		mg/kg	11.9	SW846 6010C	2/6/12	KMK	2/7/12 03:17	KMH	A1

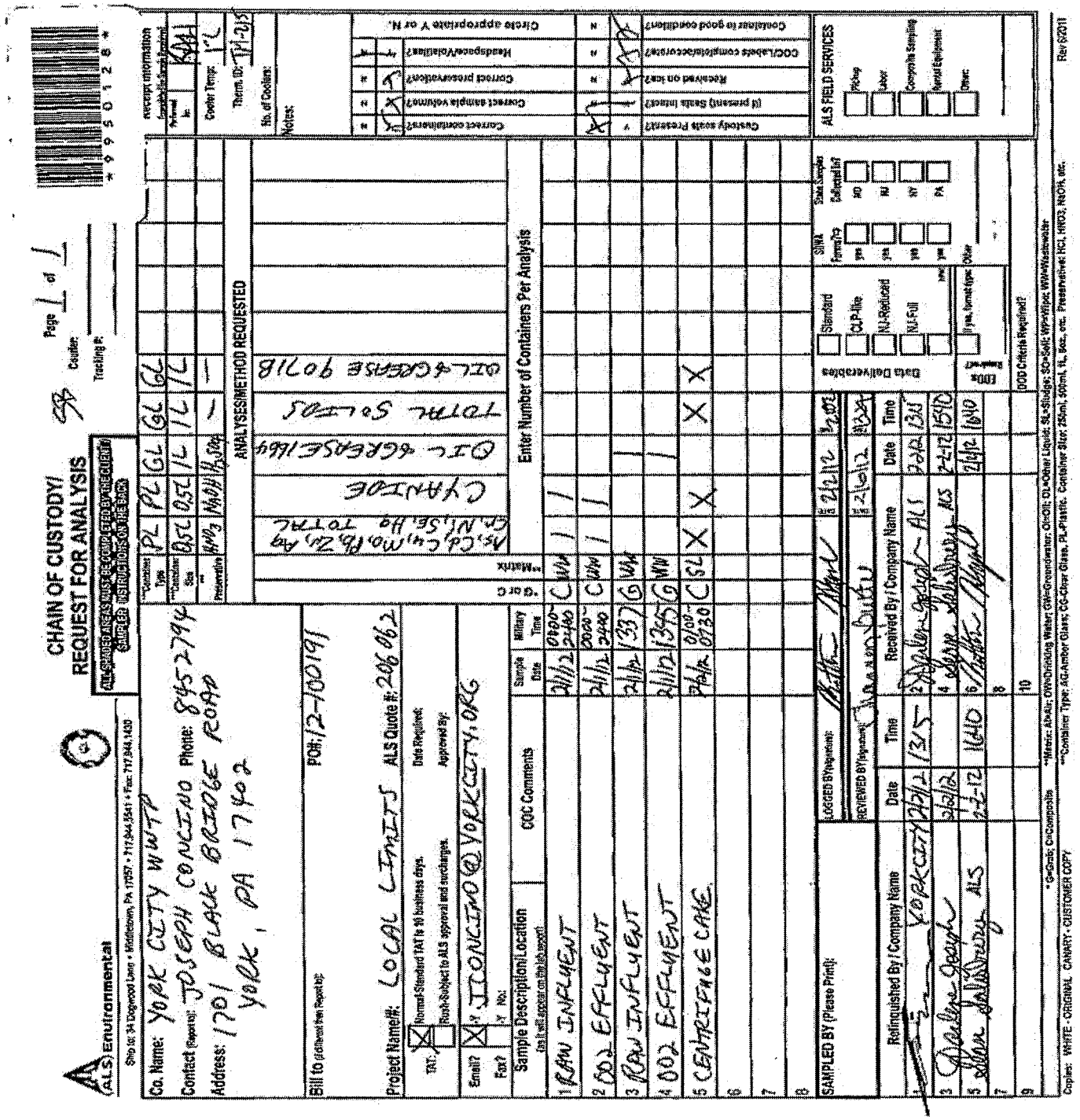
Sample Comments:

Anna G Milliken
Technical Manager

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: CT PH-0224 , DE ID 11 , GA 914 , MA PA0102 , MD 128 , LA 04162 , VA 421 , WY EPA Region 8 , WV 343



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: CT PH-0224 , DE ID 11 , GA 914 , MA PA0102 , MD 128 , LA 04162 , VA 421 , WY EPA Region 8 , WV 343

April 16, 2012

3/28/12

Mr. Joe Concino
York, City of (WWTP)
1701 Blackridge Road
York, PA 17405

Certificate of Analysis

Project Name:	**2012-WW SAMPLES**	Workorder:	**9959419**
Purchase Order:		Workorder ID:	**EPA Scan 03/29/12**

Dear Mr. Concino,

Enclosed are the analytical results for samples received by the laboratory on Thursday, March 29, 2012.

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 Shannon Butler (Project Coordinator) or Anna G Milliken (Technical Manager) at (717) 944-5541.

Please visit us at www.analyticallab.com for a listing of ALS' NELAP accreditations and Scope of Work, as well as other links to Water Quality documentation on the internet.

This laboratory report may not be reproduced, except in full, without the written approval of ALS Environmental.

This page is included as part of the Analytical Report and must be retained as a permanent record thereof.

Anna G Milliken
Technical Manager

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: CT PH-0224 , DE ID 11 , GA 914 , MA PA0102 , MD 128 , LA 04162 , VA 421 , WY EPA Region 8 , WV 343

SAMPLE SUMMARY

Workorder: 9959419 EPA Scan 03/29/12 Discard Date: 04/30/2012

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
9959419001	Raw Influent	Waste Water	3/28/12 00:00	3/29/12 11:23	Customer
9959419002	002 Effluent	Waste Water	3/28/12 00:00	3/29/12 11:23	Customer

Workorder Comments:

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 performed in the laboratory and are therefore analyzed out of hold time.

Standard Acronyms/Flags

J, B	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

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: CT PH-0224 , DE ID 11 , GA 914 , MA PA0102 , MD 128 , LA 04162 , VA 421 , WY EPA Region 8 , WV 343

ANALYTICAL RESULTS

Workorder: 9959419 EPA Scan 03/29/12

Lab ID: **9959419001** Date Collected: 3/28/2012 00:00 Matrix: Waste Water

Sample ID: **Raw Influent** Date Received: 3/29/2012 11:23

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
Pesticides and PCBs										
Aroclor-1016	ND		ug/L	0.49	EPA 608	3/30/12	GEC	4/2/12 21:57	EGO	A1
Aroclor-1221	ND		ug/L	0.49	EPA 608	3/30/12	GEC	4/2/12 21:57	EGO	A1
Aroclor-1232	ND		ug/L	0.49	EPA 608	3/30/12	GEC	4/2/12 21:57	EGO	A1
Aroclor-1242	ND		ug/L	0.49	EPA 608	3/30/12	GEC	4/2/12 21:57	EGO	A1
Aroclor-1248	ND		ug/L	0.49	EPA 608	3/30/12	GEC	4/2/12 21:57	EGO	A1
Aroclor-1254	ND		ug/L	0.49	EPA 608	3/30/12	GEC	4/2/12 21:57	EGO	A1
Aroclor-1260	ND		ug/L	0.49	EPA 608	3/30/12	GEC	4/2/12 21:57	EGO	A1
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
Decachlorobiphenyl (S)	64		%	30-150	EPA 608	3/30/12	GEC	4/2/12 21:57	EGO	A1
Tetrachloro-m-xylene (S)	104		%	36-112	EPA 608	3/30/12	GEC	4/2/12 21:57	EGO	A1
WET CHEMISTRY										
Nitrate-N	ND		mg/L	0.20	EPA 300			3/30/12 04:16	FSC	D
Nitrite-N	ND		mg/L	0.20	EPA 300			3/30/12 04:16	FSC	D
Total Kjeldahl Nitrogen	27.0		mg/L	4.0	SM20-4500-N C	4/10/12	NJA	4/10/12 18:04	EZ	C
Total Nitrogen	27.0		mg/L	1.00	Calculation			4/16/12 15:16	JWB	C

Sample Comments:

Anna G Milliken
Technical Manager

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: CT PH-0224 , DE ID 11 , GA 914 , MA PA0102 , MD 128 , LA 04162 , VA 421 , WY EPA Region 8 , WV 343

ANALYTICAL RESULTS

Workorder: 9959419 EPA Scan 03/29/12

Lab ID: **9959419002** Date Collected: 3/28/2012 00:00 Matrix: Waste Water

Sample ID: **002 Effluent** Date Received: 3/29/2012 11:23

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
SEMIVOLATILES										
bis(2-Ethylhexyl)phthalate	ND		ug/L	2.9	EPA 625	4/3/12	GEC	4/4/12 00:39	CGS	A1
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2,4,6-Tribromophenol (S)	74.1		%	38-134	EPA 625	4/3/12	GEC	4/4/12 00:39	CGS	A1
2-Fluorobiphenyl (S)	66.7		%	37-113	EPA 625	4/3/12	GEC	4/4/12 00:39	CGS	A1
2-Fluorophenol (S)	45.1		%	17-73	EPA 625	4/3/12	GEC	4/4/12 00:39	CGS	A1
Nitrobenzene-d5 (S)	83.2		%	37-124	EPA 625	4/3/12	GEC	4/4/12 00:39	CGS	A1
Phenol-d5 (S)	29		%	11-53	EPA 625	4/3/12	GEC	4/4/12 00:39	CGS	A1
Terphenyl-d14 (S)	77.8		%	33-125	EPA 625	4/3/12	GEC	4/4/12 00:39	CGS	A1
Pesticides and PCBs										
Aroclor-1016	ND		ug/L	0.48	EPA 608	3/30/12	GEC	4/2/12 22:34	EGO	C1
Aroclor-1221	ND		ug/L	0.48	EPA 608	3/30/12	GEC	4/2/12 22:34	EGO	C1
Aroclor-1232	ND		ug/L	0.48	EPA 608	3/30/12	GEC	4/2/12 22:34	EGO	C1
Aroclor-1242	ND		ug/L	0.48	EPA 608	3/30/12	GEC	4/2/12 22:34	EGO	C1
Aroclor-1248	ND		ug/L	0.48	EPA 608	3/30/12	GEC	4/2/12 22:34	EGO	C1
Aroclor-1254	ND		ug/L	0.48	EPA 608	3/30/12	GEC	4/2/12 22:34	EGO	C1
Aroclor-1260	ND		ug/L	0.48	EPA 608	3/30/12	GEC	4/2/12 22:34	EGO	C1
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
Decachlorobiphenyl (S)	58		%	30-150	EPA 608	3/30/12	GEC	4/2/12 22:34	EGO	C1
Tetrachloro-m-xylene (S)	79.8		%	36-112	EPA 608	3/30/12	GEC	4/2/12 22:34	EGO	C1

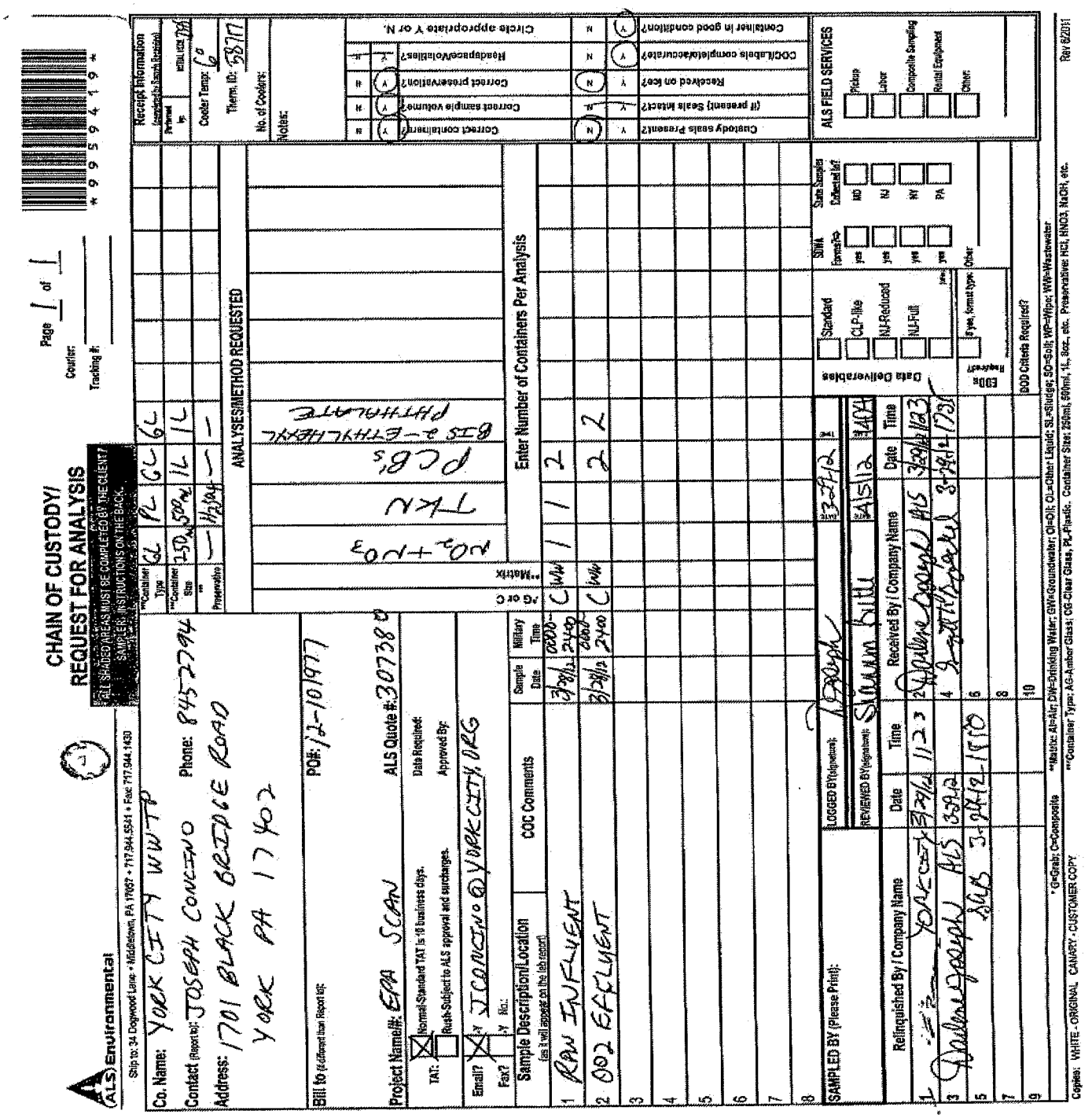
Sample Comments:

Anna G Milliken
Technical Manager

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: CT PH-0224 , DE ID 11 , GA 914 , MA PA0102 , MD 128 , LA 04162 , VA 421 , WY EPA Region 8 , WV 343



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: CT PH-0224 , DE ID 11 , GA 914 , MA PA0102 , MD 128 , LA 04162 , VA 421 , WY EPA Region 8 , WV 343

June 20, 2012

5/31/12

Mr. Joe Concino
York, City of (WWTP)
1701 Blackridge Road
York, PA 17405

Certificate of Analysis

Project Name:	**PP SCANS AND LOCAL LIMITS -**	Workorder:	**9970520**
Purchase Order:	**12-100191**	Workorder ID:	**Local Limits**

Dear Mr. Concino,

Enclosed are the analytical results for samples received by the laboratory on Friday, June 01, 2012.

The ALS Environmental laboratory in Middletown, Pennsylvania (formerly Analytical Laboratory Services, Inc.) 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 Shannon Butler (Project Coordinator) or Anna G Milliken (Technical Manager) at (717) 944-5541.

Please visit us at www.analyticallab.com for a listing of ALS' NELAP accreditations and Scope of Work, as well as other links to Water Quality documentation on the internet.

This laboratory report may not be reproduced, except in full, without the written approval of ALS Environmental.

This page is included as part of the Analytical Report and must be retained as a permanent record thereof.

Anna G Milliken
Technical Manager

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: CT PH-0224 , DE ID 11 , GA 914 , MA PA0102 , MD 128 , LA 04162 , VA 421 , WY EPA Region 8 , WV 343

SAMPLE SUMMARY

Workorder: 9970520 Local Limits

Discard Date: 07/04/2012

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
9970520001	Raw Influent Composite	Waste Water	5/31/12 00:00	6/1/12 19:25	Customer
9970520002	002 Effluent Composite	Waste Water	5/31/12 00:00	6/1/12 19:25	Customer
9970520003	Raw Influent Grab	Waste Water	5/31/12 09:32	6/1/12 19:25	Customer
9970520004	002 Effluent Grab	Waste Water	5/31/12 09:46	6/1/12 19:25	Customer
9970520005	Centrifuge Cake	Solid	5/31/12 06:30	6/1/12 19:25	Customer

Workorder Comments:

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 performed in the laboratory and are therefore analyzed out of hold time.

Standard Acronyms/Flags

J, B	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

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: CT PH-0224 , DE ID 11 , GA 914 , MA PA0102 , MD 128 , LA 04162 , VA 421 , WY EPA Region 8 , WV 343

ANALYTICAL RESULTS

Workorder: 9970520 Local Limits

Lab ID: **9970520001** Date Collected: 5/31/2012 00:00 Matrix: Waste Water

Sample ID: **Raw Influent Composite** Date Received: 6/1/2012 19:25

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
WET CHEMISTRY										
Cyanide, Total	ND		mg/L	0.0050	EPA 335.4	6/4/12	JEP	6/4/12 13:49	JEP	A1
METALS										
Arsenic, Total	ND		mg/L	0.0050	EPA 200.7	6/6/12	KMK	6/7/12 16:30	JWK	B2
Cadmium, Total	ND		mg/L	0.0010	EPA 200.7	6/6/12	KMK	6/7/12 16:30	JWK	B2
Chromium, Total	0.0027		mg/L	0.0010	EPA 200.8	6/6/12	KMK	6/8/12 16:25	MWO	B3
Copper, Total	0.071		mg/L	0.0050	EPA 200.7	6/6/12	KMK	6/7/12 16:30	JWK	B2
Lead, Total	0.011		mg/L	0.0030	EPA 200.7	6/6/12	KMK	6/7/12 16:30	JWK	B2
Mercury, Total	ND		mg/L	0.00050	EPA 245.1	6/6/12	MNP	6/6/12 12:36	MNP	B1
Molybdenum, Total	0.026		mg/L	0.010	EPA 200.7	6/6/12	KMK	6/7/12 16:30	JWK	B2
Nickel, Total	0.0043		mg/L	0.0025	EPA 200.8	6/6/12	KMK	6/8/12 16:25	MWO	B3
Selenium, Total	ND		mg/L	0.0020	EPA 200.8	6/6/12	KMK	6/8/12 16:25	MWO	B3
Silver, Total	0.0013		mg/L	0.0010	EPA 200.8	6/6/12	KMK	6/8/12 16:25	MWO	B3
Zinc, Total	0.17		mg/L	0.010	EPA 200.7	6/6/12	KMK	6/7/12 16:30	JWK	B2

Sample Comments:

Anna G Milliken
Technical Manager

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: CT PH-0224 , DE ID 11 , GA 914 , MA PA0102 , MD 128 , LA 04162 , VA 421 , WY EPA Region 8 , WV 343

ANALYTICAL RESULTS

Workorder: 9970520 Local Limits

Lab ID: **9970520002** Date Collected: 5/31/2012 00:00 Matrix: Waste Water

Sample ID: **002 Effluent Composite** Date Received: 6/1/2012 19:25

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
WET CHEMISTRY										
Cyanide, Total	ND		mg/L	0.0050	EPA 335.4	6/4/12	JEP	6/4/12 13:49	JEP	A1
METALS										
Arsenic, Total	ND		mg/L	0.0050	EPA 200.7	6/6/12	KMK	6/7/12 16:35	JWK	B2
Cadmium, Total	ND		mg/L	0.0010	EPA 200.7	6/6/12	KMK	6/7/12 16:35	JWK	B2
Chromium, Total	ND		mg/L	0.0010	EPA 200.8	6/6/12	KMK	6/8/12 16:29	MWO	B3
Copper, Total	ND		mg/L	0.0050	EPA 200.7	6/6/12	KMK	6/7/12 16:35	JWK	B2
Lead, Total	ND		mg/L	0.0030	EPA 200.7	6/6/12	KMK	6/7/12 16:35	JWK	B2
Mercury, Total	ND		mg/L	0.00050	EPA 245.1	6/6/12	MNP	6/6/12 12:39	MNP	B1
Molybdenum, Total	0.029		mg/L	0.010	EPA 200.7	6/6/12	KMK	6/7/12 16:35	JWK	B2
Nickel, Total	0.0029		mg/L	0.0025	EPA 200.8	6/6/12	KMK	6/8/12 16:29	MWO	B3
Selenium, Total	ND		mg/L	0.0020	EPA 200.8	6/6/12	KMK	6/8/12 16:29	MWO	B3
Silver, Total	ND		mg/L	0.0010	EPA 200.8	6/6/12	KMK	6/8/12 16:29	MWO	B3
Zinc, Total	0.034		mg/L	0.010	EPA 200.7	6/6/12	KMK	6/7/12 16:35	JWK	B2

Sample Comments:

Anna G Milliken
Technical Manager

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: CT PH-0224 , DE ID 11 , GA 914 , MA PA0102 , MD 128 , LA 04162 , VA 421 , WY EPA Region 8 , WV 343

ANALYTICAL RESULTS

Workorder: 9970520 Local Limits

Lab ID: **9970520003** Date Collected: 5/31/2012 09:32 Matrix: Waste Water

Sample ID: **Raw Influent Grab** Date Received: 6/1/2012 19:25

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
WET CHEMISTRY										
Oil/Grease Hexane Extractable	8.2		mg/L	2.6	EPA 1664A			6/11/12 11:15	JDH	A

Sample Comments:

Anna G Milliken
Technical Manager

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: CT PH-0224 , DE ID 11 , GA 914 , MA PA0102 , MD 128 , LA 04162 , VA 421 , WY EPA Region 8 , WV 343

ANALYTICAL RESULTS

Workorder: 9970520 Local Limits

Lab ID: **9970520004** Date Collected: 5/31/2012 09:46 Matrix: Waste Water

Sample ID: **002 Effluent Grab** Date Received: 6/1/2012 19:25

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
WET CHEMISTRY										
Oil/Grease Hexane Extractable	ND		mg/L	2.1	EPA 1664A			6/11/12 11:15	JDH	A

Sample Comments:

Anna G Milliken
Technical Manager

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: CT PH-0224 , DE ID 11 , GA 914 , MA PA0102 , MD 128 , LA 04162 , VA 421 , WY EPA Region 8 , WV 343

ANALYTICAL RESULTS

Workorder: 9970520 Local Limits

Lab ID: **9970520005** Date Collected: 5/31/2012 06:30 Matrix: Solid

Sample ID: **Centrifuge Cake** Date Received: 6/1/2012 19:25

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
WET CHEMISTRY										
Cyanide, Total	ND		mg/kg	1.8	SW846 9012B	6/5/12	ARK	6/6/12 09:42	JEP	A1
Hexane Extractable Material	36300		mg/kg	1370	SW846 9071B			6/19/12 11:00	NJA	A
Moisture	85.4		%	0.1	SM20-2540 G			6/7/12 09:10	KED	A
Silica Gel Treated HEM	15700		mg/kg	1370	SW846 9071B			6/19/12 11:00	NJA	A
Total Solids	14.6		%	0.1	SM20-2540 G			6/7/12 09:10	KED	A
METALS										
Arsenic, Total	ND		mg/kg	12.0	SW846 6010C	6/6/12	KMK	6/7/12 04:52	KMH	A2
Cadmium, Total	3.0		mg/kg	3.0	SW846 6010C	6/6/12	KMK	6/7/12 04:52	KMH	A2
Chromium, Total	31.0		mg/kg	6.0	SW846 6010C	6/6/12	KMK	6/8/12 05:52	KMH	A2
Copper, Total	450		mg/kg	12.0	SW846 6010C	6/6/12	KMK	6/7/12 04:52	KMH	A2
Lead, Total	63.3		mg/kg	12.0	SW846 6010C	6/6/12	KMK	6/7/12 04:52	KMH	A2
Mercury, Total	1.2		mg/kg	0.29	SW846 7471B	6/8/12	MNP	6/8/12 12:18	MNP	A3
Molybdenum, Total	23.6		mg/kg	12.0	SW846 6010C	6/6/12	KMK	6/7/12 04:52	KMH	A2
Nickel, Total	26.2		mg/kg	12.0	SW846 6010C	6/6/12	KMK	6/7/12 04:52	KMH	A2
Selenium, Total	ND		mg/kg	30.0	SW846 6010C	6/6/12	KMK	6/7/12 04:52	KMH	A2
Silver, Total	13.2		mg/kg	3.0	SW846 6010C	6/6/12	KMK	6/7/12 04:52	KMH	A2
Zinc, Total	670		mg/kg	12.0	SW846 6010C	6/6/12	KMK	6/7/12 04:52	KMH	A2

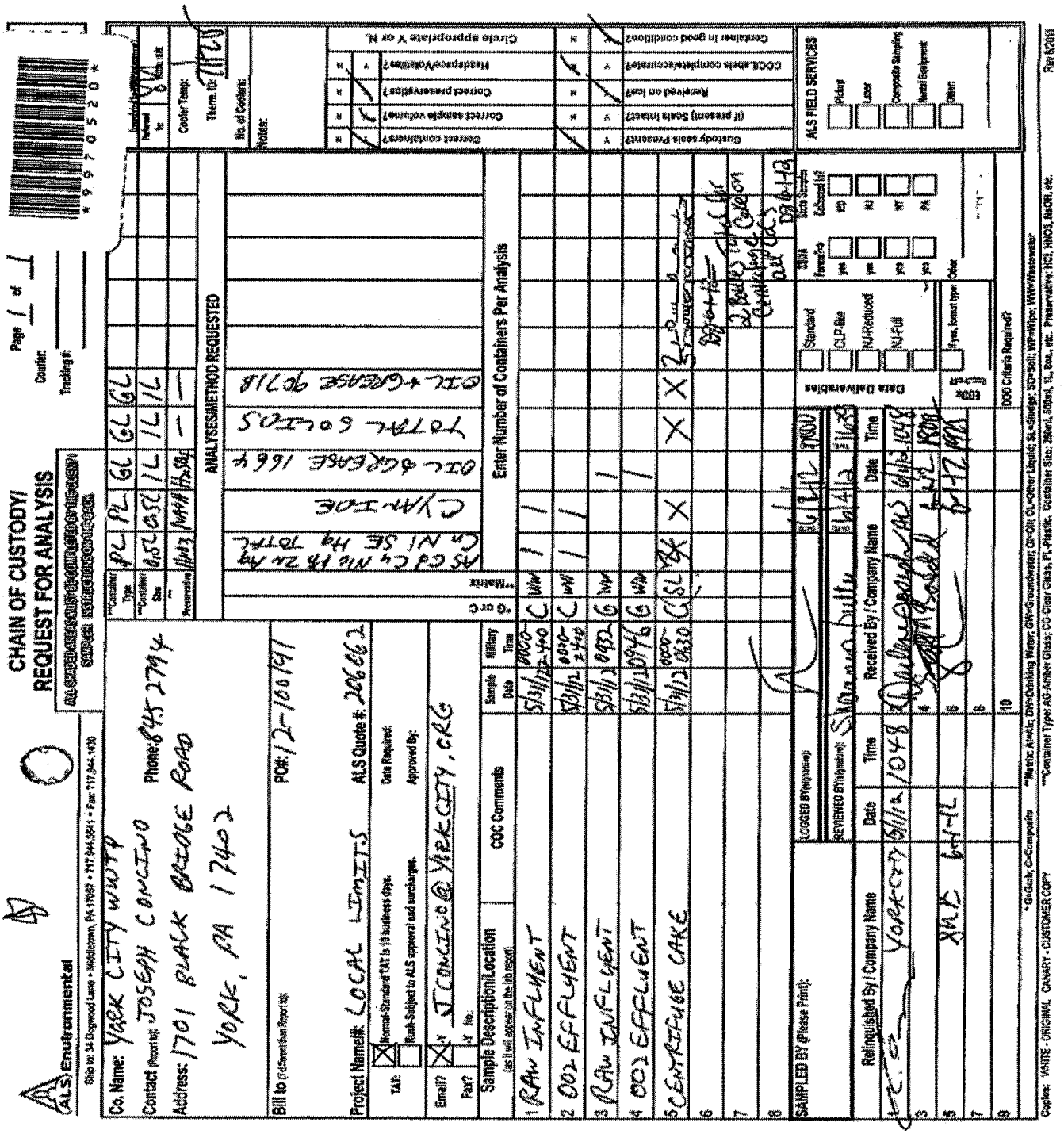
Sample Comments:

Anna G Milliken
Technical Manager

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: CT PH-0224 , DE ID 11 , GA 914 , MA PA0102 , MD 128 , LA 04162 , VA 421 , WY EPA Region 8 , WV 343



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: CT PH-0224 , DE ID 11 , GA 914 , MA PA0102 , MD 128 , LA 04162 , VA 421 , WY EPA Region 8 , WV 343

June 12, 2012

5/31/2012

Mr. Joe Concino
York, City of (WWTP)
1701 Blackridge Road
York, PA 17405

Certificate of Analysis

Project Name:	**PP SCANS AND LOCAL LIMITS -**	Workorder:	**9970522**
Purchase Order:	**12-100188**	Workorder ID:	**Priority Pollutants**

Dear Mr. Concino,

Enclosed are the analytical results for samples received by the laboratory on Friday, June 01, 2012.

The ALS Environmental laboratory in Middletown, Pennsylvania (formerly Analytical Laboratory Services, Inc.) 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 Shannon Butler (Project Coordinator) or Anna G Milliken (Technical Manager) at (717) 944-5541.

Please visit us at www.analyticallab.com for a listing of ALS' NELAP accreditations and Scope of Work, as well as other links to Water Quality documentation on the internet.

This laboratory report may not be reproduced, except in full, without the written approval of ALS Environmental.

This page is included as part of the Analytical Report and must be retained as a permanent record thereof.

Anna G Milliken
Technical Manager

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: CT PH-0224 , DE ID 11 , GA 914 , MA PA0102 , MD 128 , LA 04162 , VA 421 , WY EPA Region 8 , WV 343

SAMPLE SUMMARY

Workorder: 9970522 Priority Pollutants

Discard Date: 06/26/2012

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
9970522001	Raw Influent Composite	Waste Water	5/31/12 00:00	6/1/12 19:25	Customer
9970522002	Raw Influent Grab	Waste Water	5/31/12 09:32	6/1/12 19:25	Customer
9970522003	Centrifuge Cake	Solid	5/31/12 06:30	6/1/12 19:25	Customer

Workorder Comments:

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 performed in the laboratory and are therefore analyzed out of hold time.

Standard Acronyms/Flags

J, B	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

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: CT PH-0224 , DE ID 11 , GA 914 , MA PA0102 , MD 128 , LA 04162 , VA 421 , WY EPA Region 8 , WV 343

ANALYTICAL RESULTS

Workorder: 9970522 Priority Pollutants

Lab ID: **9970522001** Date Collected: 5/31/2012 00:00 Matrix: Waste Water

Sample ID: **Raw Influent Composite** Date Received: 6/1/2012 19:25

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
SEMIVOLATILES										
Acenaphthene	ND		ug/L	1.6	EPA 625	6/4/12	GEC	6/5/12 03:22	CGS	A1
Acenaphthylene	ND		ug/L	1.6	EPA 625	6/4/12	GEC	6/5/12 03:22	CGS	A1
Anthracene	ND		ug/L	1.6	EPA 625	6/4/12	GEC	6/5/12 03:22	CGS	A1
Benzidine	ND		ug/L	53.8	EPA 625	6/4/12	GEC	6/5/12 03:22	CGS	A1
Benzo(a)anthracene	ND		ug/L	1.6	EPA 625	6/4/12	GEC	6/5/12 03:22	CGS	A1
Benzo(a)pyrene	ND		ug/L	1.6	EPA 625	6/4/12	GEC	6/5/12 03:22	CGS	A1
Benzo(b)fluoranthene	ND		ug/L	1.6	EPA 625	6/4/12	GEC	6/5/12 03:22	CGS	A1
Benzo(g,h,i)perylene	ND		ug/L	1.6	EPA 625	6/4/12	GEC	6/5/12 03:22	CGS	A1
Benzo(k)fluoranthene	ND		ug/L	1.6	EPA 625	6/4/12	GEC	6/5/12 03:22	CGS	A1
4-Bromophenyl-phenylether	ND		ug/L	3.2	EPA 625	6/4/12	GEC	6/5/12 03:22	CGS	A1
Butylbenzylphthalate	ND		ug/L	3.2	EPA 625	6/4/12	GEC	6/5/12 03:22	CGS	A1
4-Chloro-3-methylphenol	ND		ug/L	8.6	EPA 625	6/4/12	GEC	6/5/12 03:22	CGS	A1
bis(2-Chloroethoxy)methane	ND		ug/L	3.2	EPA 625	6/4/12	GEC	6/5/12 03:22	CGS	A1
bis(2-Chloroethyl)ether	ND		ug/L	3.2	EPA 625	6/4/12	GEC	6/5/12 03:22	CGS	A1
bis(2-Chloroisopropyl)ether	ND		ug/L	3.2	EPA 625	6/4/12	GEC	6/5/12 03:22	CGS	A1
2-Chloronaphthalene	ND	1	ug/L	3.2	EPA 625	6/4/12	GEC	6/5/12 03:22	CGS	A1
2-Chlorophenol	ND		ug/L	8.6	EPA 625	6/4/12	GEC	6/5/12 03:22	CGS	A1
4-Chlorophenyl-phenylether	ND		ug/L	3.2	EPA 625	6/4/12	GEC	6/5/12 03:22	CGS	A1
Chrysene	ND		ug/L	1.6	EPA 625	6/4/12	GEC	6/5/12 03:22	CGS	A1
Di-n-Butylphthalate	ND		ug/L	3.2	EPA 625	6/4/12	GEC	6/5/12 03:22	CGS	A1
Di-n-Octylphthalate	ND		ug/L	8.6	EPA 625	6/4/12	GEC	6/5/12 03:22	CGS	A1
Dibenzo(a,h)anthracene	ND		ug/L	1.6	EPA 625	6/4/12	GEC	6/5/12 03:22	CGS	A1
3,3-Dichlorobenzidine	ND		ug/L	17.2	EPA 625	6/4/12	GEC	6/5/12 03:22	CGS	A1
2,4-Dichlorophenol	ND		ug/L	8.6	EPA 625	6/4/12	GEC	6/5/12 03:22	CGS	A1
Diethylphthalate	ND		ug/L	8.6	EPA 625	6/4/12	GEC	6/5/12 03:22	CGS	A1
2,4-Dimethylphenol	ND		ug/L	8.6	EPA 625	6/4/12	GEC	6/5/12 03:22	CGS	A1
Dimethylphthalate	ND		ug/L	8.6	EPA 625	6/4/12	GEC	6/5/12 03:22	CGS	A1
2,4-Dinitrophenol	ND		ug/L	17.2	EPA 625	6/4/12	GEC	6/5/12 03:22	CGS	A1
2,4-Dinitrotoluene	ND		ug/L	3.2	EPA 625	6/4/12	GEC	6/5/12 03:22	CGS	A1
2,6-Dinitrotoluene	ND		ug/L	3.2	EPA 625	6/4/12	GEC	6/5/12 03:22	CGS	A1
1,2-Diphenylhydrazine	ND		ug/L	3.2	EPA 625	6/4/12	GEC	6/5/12 03:22	CGS	A1
bis(2-Ethylhexyl)phthalate	216		ug/L	6.5	EPA 625	6/4/12	GEC	6/5/12 12:44	SAS	A1
Fluoranthene	ND		ug/L	1.6	EPA 625	6/4/12	GEC	6/5/12 03:22	CGS	A1
Fluorene	ND		ug/L	1.6	EPA 625	6/4/12	GEC	6/5/12 03:22	CGS	A1
Hexachlorobenzene	ND		ug/L	3.2	EPA 625	6/4/12	GEC	6/5/12 03:22	CGS	A1
Hexachlorobutadiene	ND		ug/L	3.2	EPA 625	6/4/12	GEC	6/5/12 03:22	CGS	A1
Hexachlorocyclopentadiene	ND		ug/L	8.6	EPA 625	6/4/12	GEC	6/5/12 03:22	CGS	A1
Hexachloroethane	ND		ug/L	3.2	EPA 625	6/4/12	GEC	6/5/12 03:22	CGS	A1
Indeno(1,2,3-cd)pyrene	ND		ug/L	1.6	EPA 625	6/4/12	GEC	6/5/12 03:22	CGS	A1
Isophorone	ND		ug/L	3.2	EPA 625	6/4/12	GEC	6/5/12 03:22	CGS	A1

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: CT PH-0224 , DE ID 11 , GA 914 , MA PA0102 , MD 128 , LA 04162 , VA 421 , WY EPA Region 8 , WV 343

ANALYTICAL RESULTS

Workorder: 9970522 Priority Pollutants

Lab ID: **9970522001** Date Collected: 5/31/2012 00:00 Matrix: Waste Water

Sample ID: **Raw Influent Composite** Date Received: 6/1/2012 19:25

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
2-Methyl-4,6-dinitrophenol	ND		ug/L	8.6	EPA 625	6/4/12	GEC	6/5/12 03:22	CGS	A1
Naphthalene	ND		ug/L	1.6	EPA 625	6/4/12	GEC	6/5/12 03:22	CGS	A1
Nitrobenzene	ND		ug/L	3.2	EPA 625	6/4/12	GEC	6/5/12 03:22	CGS	A1
2-Nitrophenol	ND		ug/L	8.6	EPA 625	6/4/12	GEC	6/5/12 03:22	CGS	A1
4-Nitrophenol	ND		ug/L	8.6	EPA 625	6/4/12	GEC	6/5/12 03:22	CGS	A1
N-Nitrosodimethylamine	ND		ug/L	3.2	EPA 625	6/4/12	GEC	6/5/12 03:22	CGS	A1
N-Nitroso-di-n-propylamine	ND		ug/L	3.2	EPA 625	6/4/12	GEC	6/5/12 03:22	CGS	A1
N-Nitrosodiphenylamine	ND		ug/L	3.2	EPA 625	6/4/12	GEC	6/5/12 03:22	CGS	A1
Pentachlorophenol	ND		ug/L	17.2	EPA 625	6/4/12	GEC	6/5/12 03:22	CGS	A1
Phenanthrene	ND		ug/L	1.6	EPA 625	6/4/12	GEC	6/5/12 03:22	CGS	A1
Phenol	ND		ug/L	8.6	EPA 625	6/4/12	GEC	6/5/12 03:22	CGS	A1
Pyrene	ND		ug/L	1.6	EPA 625	6/4/12	GEC	6/5/12 03:22	CGS	A1
1,2,4-Trichlorobenzene	ND		ug/L	3.2	EPA 625	6/4/12	GEC	6/5/12 03:22	CGS	A1
2,4,6-Trichlorophenol	ND		ug/L	8.6	EPA 625	6/4/12	GEC	6/5/12 03:22	CGS	A1
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2,4,6-Tribromophenol (S)	64.7		%	38-134	EPA 625	6/4/12	GEC	6/5/12 03:22	CGS	A1
2-Fluorobiphenyl (S)	54.3		%	37-113	EPA 625	6/4/12	GEC	6/5/12 03:22	CGS	A1
2-Fluorophenol (S)	35.7		%	17-73	EPA 625	6/4/12	GEC	6/5/12 03:22	CGS	A1
Nitrobenzene-d5 (S)	76.6		%	37-124	EPA 625	6/4/12	GEC	6/5/12 03:22	CGS	A1
Phenol-d5 (S)	23.5		%	11-53	EPA 625	6/4/12	GEC	6/5/12 03:22	CGS	A1
Terphenyl-d14 (S)	82.6		%	33-125	EPA 625	6/4/12	GEC	6/5/12 03:22	CGS	A1
2,4,6-Tribromophenol (S)	65.1		%	38-134	EPA 625	6/4/12	GEC	6/5/12 12:44	SAS	A1
2-Fluorobiphenyl (S)	57.4		%	37-113	EPA 625	6/4/12	GEC	6/5/12 12:44	SAS	A1
2-Fluorophenol (S)	37.8		%	17-73	EPA 625	6/4/12	GEC	6/5/12 12:44	SAS	A1
Nitrobenzene-d5 (S)	81.1		%	37-124	EPA 625	6/4/12	GEC	6/5/12 12:44	SAS	A1
Phenol-d5 (S)	28.7		%	11-53	EPA 625	6/4/12	GEC	6/5/12 12:44	SAS	A1
Terphenyl-d14 (S)	80.2		%	33-125	EPA 625	6/4/12	GEC	6/5/12 12:44	SAS	A1
Pesticides and PCBs										
Aldrin	ND		ug/L	0.27	EPA 608	6/5/12	LEH	6/7/12 08:54	KJH	B1
alpha-BHC	ND		ug/L	0.27	EPA 608	6/5/12	LEH	6/7/12 08:54	KJH	B1
beta-BHC	ND		ug/L	0.27	EPA 608	6/5/12	LEH	6/7/12 08:54	KJH	B1
delta-BHC	ND		ug/L	0.27	EPA 608	6/5/12	LEH	6/7/12 08:54	KJH	B1
gamma-BHC	ND		ug/L	0.27	EPA 608	6/5/12	LEH	6/7/12 08:54	KJH	B1
Chlordane	ND		ug/L	5.3	EPA 608	6/5/12	LEH	6/7/12 08:54	KJH	B1
4,4'-DDD	ND		ug/L	0.27	EPA 608	6/5/12	LEH	6/7/12 08:54	KJH	B1
4,4'-DDE	ND		ug/L	0.27	EPA 608	6/5/12	LEH	6/7/12 08:54	KJH	B1
4,4'-DDT	ND		ug/L	0.27	EPA 608	6/5/12	LEH	6/7/12 08:54	KJH	B1
Dieldrin	ND		ug/L	0.27	EPA 608	6/5/12	LEH	6/7/12 08:54	KJH	B1
Endosulfan I	ND		ug/L	0.27	EPA 608	6/5/12	LEH	6/7/12 08:54	KJH	B1

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: CT PH-0224 , DE ID 11 , GA 914 , MA PA0102 , MD 128 , LA 04162 , VA 421 , WY EPA Region 8 , WV 343

ANALYTICAL RESULTS

Workorder: 9970522 Priority Pollutants

Lab ID: **9970522001** Date Collected: 5/31/2012 00:00 Matrix: Waste Water

Sample ID: **Raw Influent Composite** Date Received: 6/1/2012 19:25

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
Endosulfan II	ND		ug/L	0.27	EPA 608	6/5/12	LEH	6/7/12 08:54	KJH	B1
Endosulfan Sulfate	ND		ug/L	0.27	EPA 608	6/5/12	LEH	6/7/12 08:54	KJH	B1
Endrin	ND		ug/L	0.27	EPA 608	6/5/12	LEH	6/7/12 08:54	KJH	B1
Endrin Aldehyde	ND		ug/L	0.27	EPA 608	6/5/12	LEH	6/7/12 08:54	KJH	B1
Heptachlor	ND		ug/L	0.27	EPA 608	6/5/12	LEH	6/7/12 08:54	KJH	B1
Heptachlor Epoxide	ND		ug/L	0.27	EPA 608	6/5/12	LEH	6/7/12 08:54	KJH	B1
Mirex	ND		ug/L	0.27	EPA 608	6/5/12	LEH	6/7/12 08:54	KJH	B1
Toxaphene	ND		ug/L	10.6	EPA 608	6/5/12	LEH	6/7/12 08:54	KJH	B1
Aroclor-1016	ND		ug/L	5.3	EPA 608	6/5/12	LEH	6/7/12 08:54	KJH	B1
Aroclor-1221	ND		ug/L	5.3	EPA 608	6/5/12	LEH	6/7/12 08:54	KJH	B1
Aroclor-1232	ND		ug/L	5.3	EPA 608	6/5/12	LEH	6/7/12 08:54	KJH	B1
Aroclor-1242	ND		ug/L	5.3	EPA 608	6/5/12	LEH	6/7/12 08:54	KJH	B1
Aroclor-1248	ND		ug/L	5.3	EPA 608	6/5/12	LEH	6/7/12 08:54	KJH	B1
Aroclor-1254	ND		ug/L	5.3	EPA 608	6/5/12	LEH	6/7/12 08:54	KJH	B1
Aroclor-1260	ND		ug/L	5.3	EPA 608	6/5/12	LEH	6/7/12 08:54	KJH	B1
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
Decachlorobiphenyl (S)	36.6		%	30-150	EPA 608	6/5/12	LEH	6/7/12 08:54	KJH	B1
Tetrachloro-m-xylene (S)	70.1		%	36-112	EPA 608	6/5/12	LEH	6/7/12 08:54	KJH	B1
WET CHEMISTRY										
Cyanide, Total	ND		mg/L	0.0050	EPA 335.4	6/5/12	ARK	6/6/12 09:42	JEP	E1
Phenolics	0.03		mg/L	0.01	EPA 420.4	6/7/12	BPW	6/12/12 09:29	SAM	F2
METALS										
Antimony, Total	ND		mg/L	0.010	EPA 200.7	6/6/12	KMK	6/7/12 16:40	JWK	D2
Arsenic, Total	ND		mg/L	0.0050	EPA 200.7	6/6/12	KMK	6/7/12 16:40	JWK	D2
Beryllium, Total	ND		mg/L	0.0020	EPA 200.7	6/6/12	KMK	6/7/12 16:40	JWK	D2
Cadmium, Total	ND		mg/L	0.0010	EPA 200.7	6/6/12	KMK	6/7/12 16:40	JWK	D2
Chromium, Total	0.0030		mg/L	0.0025	EPA 200.7	6/6/12	KMK	6/7/12 16:40	JWK	D2
Copper, Total	0.062		mg/L	0.0050	EPA 200.7	6/6/12	KMK	6/7/12 16:40	JWK	D2
Lead, Total	0.011		mg/L	0.0030	EPA 200.7	6/6/12	KMK	6/7/12 16:40	JWK	D2
Mercury, Total	ND		mg/L	0.00050	EPA 245.1	6/6/12	MNP	6/6/12 12:40	MNP	D1
Nickel, Total	ND		mg/L	0.010	EPA 200.7	6/6/12	KMK	6/7/12 16:40	JWK	D2
Selenium, Total	ND		mg/L	0.010	EPA 200.7	6/6/12	KMK	6/7/12 16:40	JWK	D2
Silver, Total	0.0023		mg/L	0.0020	EPA 200.7	6/6/12	KMK	6/7/12 16:40	JWK	D2
Thallium, Total	ND		mg/L	0.010	EPA 200.7	6/6/12	KMK	6/7/12 16:40	JWK	D2
Zinc, Total	0.16		mg/L	0.010	EPA 200.7	6/6/12	KMK	6/7/12 16:40	JWK	D2

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: CT PH-0224 , DE ID 11 , GA 914 , MA PA0102 , MD 128 , LA 04162 , VA 421 , WY EPA Region 8 , WV 343

ANALYTICAL RESULTS

Workorder: 9970522 Priority Pollutants

Lab ID:	**9970522001**	Date Collected:	5/31/2012 00:00	Matrix:	Waste Water
Sample ID:	**Raw Influent Composite**	Date Received:	6/1/2012 19:25		

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed By	Cntr

Sample Comments:

This sample was analyzed at a dilution in the 608 analysis due to sample matrix interference. Reporting limits were adjusted accordingly.

Anna G Milliken
Technical Manager

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: CT PH-0224 , DE ID 11 , GA 914 , MA PA0102 , MD 128 , LA 04162 , VA 421 , WY EPA Region 8 , WV 343

ANALYTICAL RESULTS

Workorder: 9970522 Priority Pollutants

Lab ID: **9970522002** Date Collected: 5/31/2012 09:32 Matrix: Waste Water

Sample ID: **Raw Influent Grab** Date Received: 6/1/2012 19:25

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
VOLATILE ORGANICS										
Acrolein	ND		ug/L	30.0	EPA 624			6/5/12 15:59	GLQ	A
Acrylonitrile	ND		ug/L	5.0	EPA 624			6/5/12 15:59	GLQ	A
Benzene	ND		ug/L	1.0	EPA 624			6/5/12 15:59	GLQ	A
Bromodichloromethane	ND		ug/L	1.0	EPA 624			6/5/12 15:59	GLQ	A
Bromoform	ND		ug/L	2.0	EPA 624			6/5/12 15:59	GLQ	A
Bromomethane	ND		ug/L	2.0	EPA 624			6/5/12 15:59	GLQ	A
Carbon Tetrachloride	ND		ug/L	1.0	EPA 624			6/5/12 15:59	GLQ	A
Chlorobenzene	ND		ug/L	1.0	EPA 624			6/5/12 15:59	GLQ	A
Chlorodibromomethane	ND		ug/L	1.0	EPA 624			6/5/12 15:59	GLQ	A
Chloroethane	ND		ug/L	1.0	EPA 624			6/5/12 15:59	GLQ	A
2-Chloroethylvinyl ether	ND		ug/L	2.0	EPA 624			6/5/12 15:59	GLQ	A
Chloroform	2.8		ug/L	1.0	EPA 624			6/5/12 15:59	GLQ	A
Chloromethane	ND		ug/L	1.0	EPA 624			6/5/12 15:59	GLQ	A
1,2-Dichlorobenzene	ND		ug/L	1.0	EPA 624			6/5/12 15:59	GLQ	A
1,3-Dichlorobenzene	ND		ug/L	1.0	EPA 624			6/5/12 15:59	GLQ	A
1,4-Dichlorobenzene	ND		ug/L	1.0	EPA 624			6/5/12 15:59	GLQ	A
1,1-Dichloroethane	ND		ug/L	1.0	EPA 624			6/5/12 15:59	GLQ	A
1,2-Dichloroethane	ND		ug/L	1.0	EPA 624			6/5/12 15:59	GLQ	A
1,1-Dichloroethene	ND		ug/L	1.0	EPA 624			6/5/12 15:59	GLQ	A
trans-1,2-Dichloroethene	ND		ug/L	1.0	EPA 624			6/5/12 15:59	GLQ	A
1,2-Dichloropropane	ND		ug/L	1.0	EPA 624			6/5/12 15:59	GLQ	A
cis-1,3-Dichloropropene	ND		ug/L	1.0	EPA 624			6/5/12 15:59	GLQ	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	EPA 624			6/5/12 15:59	GLQ	A
1,3-Dichloropropene, Total	ND		ug/L	1.0	EPA 624			6/5/12 15:59	GLQ	A
Ethylbenzene	ND		ug/L	1.0	EPA 624			6/5/12 15:59	GLQ	A
Methylene Chloride	ND		ug/L	1.0	EPA 624			6/5/12 15:59	GLQ	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	EPA 624			6/5/12 15:59	GLQ	A
Tetrachloroethene	ND		ug/L	1.0	EPA 624			6/5/12 15:59	GLQ	A
Toluene	8.5		ug/L	1.0	EPA 624			6/5/12 15:59	GLQ	A
1,1,1-Trichloroethane	ND		ug/L	1.0	EPA 624			6/5/12 15:59	GLQ	A
1,1,2-Trichloroethane	ND		ug/L	1.0	EPA 624			6/5/12 15:59	GLQ	A
Trichloroethene	1.1		ug/L	1.0	EPA 624			6/5/12 15:59	GLQ	A
Trichlorofluoromethane	ND		ug/L	1.0	EPA 624			6/5/12 15:59	GLQ	A
Vinyl Chloride	ND		ug/L	2.0	EPA 624			6/5/12 15:59	GLQ	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	92.1		%	72-142	EPA 624			6/5/12 15:59	GLQ	A
4-Bromofluorobenzene (S)	93.1		%	73-119	EPA 624			6/5/12 15:59	GLQ	A
Dibromofluoromethane (S)	96.8		%	74-132	EPA 624			6/5/12 15:59	GLQ	A
Toluene-d8 (S)	111		%	75-133	EPA 624			6/5/12 15:59	GLQ	A

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: CT PH-0224 , DE ID 11 , GA 914 , MA PA0102 , MD 128 , LA 04162 , VA 421 , WY EPA Region 8 , WV 343

ANALYTICAL RESULTS

Workorder: 9970522 Priority Pollutants

Lab ID:	**9970522002**	Date Collected:	5/31/2012 09:32	Matrix:	Waste Water
Sample ID:	**Raw Influent Grab**	Date Received:	6/1/2012 19:25		

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed By	Cntr

Sample Comments:

Anna G Milliken
Technical Manager

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: CT PH-0224 , DE ID 11 , GA 914 , MA PA0102 , MD 128 , LA 04162 , VA 421 , WY EPA Region 8 , WV 343

ANALYTICAL RESULTS

Workorder: 9970522 Priority Pollutants

Lab ID: **9970522003** Date Collected: 5/31/2012 06:30 Matrix: Solid

Sample ID: **Centrifuge Cake** Date Received: 6/1/2012 19:25

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
VOLATILE ORGANICS										
Acrolein	ND		ug/kg	12100	8260/5035	6/2/12	GLQ	6/9/12 01:52	GLQ	B1
Acrylonitrile	ND		ug/kg	2430	8260/5035	6/2/12	GLQ	6/9/12 01:52	GLQ	B1
Benzene	ND		ug/kg	485	8260/5035	6/2/12	GLQ	6/9/12 01:52	GLQ	B1
Bromodichloromethane	ND		ug/kg	485	8260/5035	6/2/12	GLQ	6/9/12 01:52	GLQ	B1
Bromoform	ND		ug/kg	485	8260/5035	6/2/12	GLQ	6/9/12 01:52	GLQ	B1
Bromomethane	ND		ug/kg	485	8260/5035	6/2/12	GLQ	6/9/12 01:52	GLQ	B1
2-Butanone	ND		ug/kg	4850	8260/5035	6/2/12	GLQ	6/9/12 01:52	GLQ	B1
Carbon Tetrachloride	ND		ug/kg	485	8260/5035	6/2/12	GLQ	6/9/12 01:52	GLQ	B1
Chlorobenzene	ND		ug/kg	485	8260/5035	6/2/12	GLQ	6/9/12 01:52	GLQ	B1
Chlorodibromomethane	ND		ug/kg	485	8260/5035	6/2/12	GLQ	6/9/12 01:52	GLQ	B1
Chloroethane	ND		ug/kg	485	8260/5035	6/2/12	GLQ	6/9/12 01:52	GLQ	B1
2-Chloroethylvinyl ether	ND		ug/kg	971	8260/5035	6/2/12	GLQ	6/9/12 01:52	GLQ	B1
Chloroform	ND		ug/kg	485	8260/5035	6/2/12	GLQ	6/9/12 01:52	GLQ	B1
Chloromethane	ND		ug/kg	485	8260/5035	6/2/12	GLQ	6/9/12 01:52	GLQ	B1
1,1-Dichloroethane	ND		ug/kg	485	8260/5035	6/2/12	GLQ	6/9/12 01:52	GLQ	B1
1,2-Dichloroethane	ND		ug/kg	485	8260/5035	6/2/12	GLQ	6/9/12 01:52	GLQ	B1
1,1-Dichloroethene	ND		ug/kg	485	8260/5035	6/2/12	GLQ	6/9/12 01:52	GLQ	B1
trans-1,2-Dichloroethene	ND		ug/kg	485	8260/5035	6/2/12	GLQ	6/9/12 01:52	GLQ	B1
1,2-Dichloropropane	ND		ug/kg	485	8260/5035	6/2/12	GLQ	6/9/12 01:52	GLQ	B1
1,3-Dichloropropene, Total	ND		ug/kg	485	8260/5035	6/2/12	GLQ	6/9/12 01:52	GLQ	B1
Ethylbenzene	ND		ug/kg	485	8260/5035	6/2/12	GLQ	6/9/12 01:52	GLQ	B1
Methylene Chloride	ND		ug/kg	485	8260/5035	6/2/12	GLQ	6/9/12 01:52	GLQ	B1
1,1,2,2-Tetrachloroethane	ND		ug/kg	485	8260/5035	6/2/12	GLQ	6/9/12 01:52	GLQ	B1
Tetrachloroethene	ND		ug/kg	485	8260/5035	6/2/12	GLQ	6/9/12 01:52	GLQ	B1
Toluene	ND		ug/kg	485	8260/5035	6/2/12	GLQ	6/9/12 01:52	GLQ	B1
1,1,1-Trichloroethane	ND		ug/kg	485	8260/5035	6/2/12	GLQ	6/9/12 01:52	GLQ	B1
1,1,2-Trichloroethane	ND		ug/kg	485	8260/5035	6/2/12	GLQ	6/9/12 01:52	GLQ	B1
Trichloroethene	ND		ug/kg	485	8260/5035	6/2/12	GLQ	6/9/12 01:52	GLQ	B1
Vinyl Chloride	ND		ug/kg	485	8260/5035	6/2/12	GLQ	6/9/12 01:52	GLQ	B1
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	72.2		%	71-146	8260/5035	6/2/12	GLQ	6/9/12 01:52	GLQ	B1
4-Bromofluorobenzene (S)	51.1		%	46-138	8260/5035	6/2/12	GLQ	6/9/12 01:52	GLQ	B1
Dibromofluoromethane (S)	63.2		%	42-143	8260/5035	6/2/12	GLQ	6/9/12 01:52	GLQ	B1
Toluene-d8 (S)	61.6		%	54-141	8260/5035	6/2/12	GLQ	6/9/12 01:52	GLQ	B1
SEMIVOLATILES										
Acenaphthene	ND		ug/kg	318	SW846 8270D	6/5/12	RMK	6/7/12 04:41	SAS	A1
Acenaphthylene	ND		ug/kg	318	SW846 8270D	6/5/12	RMK	6/7/12 04:41	SAS	A1
Anthracene	ND		ug/kg	318	SW846 8270D	6/5/12	RMK	6/7/12 04:41	SAS	A1

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: CT PH-0224 , DE ID 11 , GA 914 , MA PA0102 , MD 128 , LA 04162 , VA 421 , WY EPA Region 8 , WV 343

ANALYTICAL RESULTS

Workorder: 9970522 Priority Pollutants

Lab ID: **9970522003** Date Collected: 5/31/2012 06:30 Matrix: Solid

Sample ID: **Centrifuge Cake** Date Received: 6/1/2012 19:25

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
Benzidine	ND		ug/kg	3430	SW846 8270D	6/5/12	RMK	6/7/12 04:41	SAS	A1
Benzo(a)anthracene	ND		ug/kg	318	SW846 8270D	6/5/12	RMK	6/7/12 04:41	SAS	A1
Benzo(a)pyrene	ND		ug/kg	318	SW846 8270D	6/5/12	RMK	6/7/12 04:41	SAS	A1
Benzo(b)fluoranthene	462		ug/kg	318	SW846 8270D	6/5/12	RMK	6/7/12 04:41	SAS	A1
Benzo(g,h,i)perylene	ND		ug/kg	318	SW846 8270D	6/5/12	RMK	6/7/12 04:41	SAS	A1
Benzo(k)fluoranthene	ND		ug/kg	318	SW846 8270D	6/5/12	RMK	6/7/12 04:41	SAS	A1
4-Bromophenyl-phenylether	ND		ug/kg	636	SW846 8270D	6/5/12	RMK	6/7/12 04:41	SAS	A1
Butylbenzylphthalate	ND		ug/kg	636	SW846 8270D	6/5/12	RMK	6/7/12 04:41	SAS	A1
4-Chloro-3-methylphenol	ND		ug/kg	1720	SW846 8270D	6/5/12	RMK	6/7/12 04:41	SAS	A1
bis(2-Chloroethoxy)methane	ND		ug/kg	636	SW846 8270D	6/5/12	RMK	6/7/12 04:41	SAS	A1
bis(2-Chloroethyl)ether	ND		ug/kg	636	SW846 8270D	6/5/12	RMK	6/7/12 04:41	SAS	A1
bis(2-Chloroisopropyl)ether	ND		ug/kg	636	SW846 8270D	6/5/12	RMK	6/7/12 04:41	SAS	A1
2-Chloronaphthalene	ND		ug/kg	636	SW846 8270D	6/5/12	RMK	6/7/12 04:41	SAS	A1
2-Chlorophenol	ND		ug/kg	1720	SW846 8270D	6/5/12	RMK	6/7/12 04:41	SAS	A1
4-Chlorophenyl-phenylether	ND		ug/kg	636	SW846 8270D	6/5/12	RMK	6/7/12 04:41	SAS	A1
Chrysene	ND		ug/kg	318	SW846 8270D	6/5/12	RMK	6/7/12 04:41	SAS	A1
Di-n-Butylphthalate	ND		ug/kg	636	SW846 8270D	6/5/12	RMK	6/7/12 04:41	SAS	A1
Di-n-Octylphthalate	ND		ug/kg	1720	SW846 8270D	6/5/12	RMK	6/7/12 04:41	SAS	A1
Dibenzo(a,h)anthracene	ND		ug/kg	318	SW846 8270D	6/5/12	RMK	6/7/12 04:41	SAS	A1
1,2-Dichlorobenzene	ND		ug/kg	636	SW846 8270D	6/5/12	RMK	6/7/12 04:41	SAS	A1
1,3-Dichlorobenzene	ND		ug/kg	636	SW846 8270D	6/5/12	RMK	6/7/12 04:41	SAS	A1
1,4-Dichlorobenzene	ND		ug/kg	636	SW846 8270D	6/5/12	RMK	6/7/12 04:41	SAS	A1
3,3-Dichlorobenzidine	ND		ug/kg	954	SW846 8270D	6/5/12	RMK	6/7/12 04:41	SAS	A1
2,4-Dichlorophenol	ND		ug/kg	636	SW846 8270D	6/5/12	RMK	6/7/12 04:41	SAS	A1
Diethylphthalate	ND		ug/kg	636	SW846 8270D	6/5/12	RMK	6/7/12 04:41	SAS	A1
2,4-Dimethylphenol	ND		ug/kg	1720	SW846 8270D	6/5/12	RMK	6/7/12 04:41	SAS	A1
Dimethylphthalate	ND		ug/kg	636	SW846 8270D	6/5/12	RMK	6/7/12 04:41	SAS	A1
2,4-Dinitrophenol	ND		ug/kg	636	SW846 8270D	6/5/12	RMK	6/7/12 04:41	SAS	A1
2,4-Dinitrotoluene	ND		ug/kg	636	SW846 8270D	6/5/12	RMK	6/7/12 04:41	SAS	A1
2,6-Dinitrotoluene	ND		ug/kg	636	SW846 8270D	6/5/12	RMK	6/7/12 04:41	SAS	A1
1,2-Diphenylhydrazine	ND		ug/kg	636	SW846 8270D	6/5/12	RMK	6/7/12 04:41	SAS	A1
bis(2-Ethylhexyl)phthalate	14400		ug/kg	636	SW846 8270D	6/5/12	RMK	6/7/12 04:41	SAS	A1
Fluoranthene	ND		ug/kg	318	SW846 8270D	6/5/12	RMK	6/7/12 04:41	SAS	A1
Fluorene	ND		ug/kg	318	SW846 8270D	6/5/12	RMK	6/7/12 04:41	SAS	A1
Hexachlorobenzene	ND		ug/kg	636	SW846 8270D	6/5/12	RMK	6/7/12 04:41	SAS	A1
Hexachlorobutadiene	ND		ug/kg	636	SW846 8270D	6/5/12	RMK	6/7/12 04:41	SAS	A1
Hexachlorocyclopentadiene	ND		ug/kg	1720	SW846 8270D	6/5/12	RMK	6/7/12 04:41	SAS	A1
Hexachloroethane	ND		ug/kg	636	SW846 8270D	6/5/12	RMK	6/7/12 04:41	SAS	A1
Indeno(1,2,3-cd)pyrene	ND		ug/kg	318	SW846 8270D	6/5/12	RMK	6/7/12 04:41	SAS	A1
Isophorone	ND		ug/kg	636	SW846 8270D	6/5/12	RMK	6/7/12 04:41	SAS	A1
2-Methyl-4,6-dinitrophenol	ND		ug/kg	1720	SW846 8270D	6/5/12	RMK	6/7/12 04:41	SAS	A1

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: CT PH-0224 , DE ID 11 , GA 914 , MA PA0102 , MD 128 , LA 04162 , VA 421 , WY EPA Region 8 , WV 343

ANALYTICAL RESULTS

Workorder: 9970522 Priority Pollutants

Lab ID: **9970522003** Date Collected: 5/31/2012 06:30 Matrix: Solid

Sample ID: **Centrifuge Cake** Date Received: 6/1/2012 19:25

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
Naphthalene	ND		ug/kg	318	SW846 8270D	6/5/12	RMK	6/7/12 04:41	SAS	A1
Nitrobenzene	ND		ug/kg	636	SW846 8270D	6/5/12	RMK	6/7/12 04:41	SAS	A1
2-Nitrophenol	ND		ug/kg	1720	SW846 8270D	6/5/12	RMK	6/7/12 04:41	SAS	A1
4-Nitrophenol	ND		ug/kg	1720	SW846 8270D	6/5/12	RMK	6/7/12 04:41	SAS	A1
N-Nitrosodimethylamine	ND		ug/kg	636	SW846 8270D	6/5/12	RMK	6/7/12 04:41	SAS	A1
N-Nitroso-di-n-propylamine	ND		ug/kg	636	SW846 8270D	6/5/12	RMK	6/7/12 04:41	SAS	A1
N-Nitrosodiphenylamine	ND		ug/kg	636	SW846 8270D	6/5/12	RMK	6/7/12 04:41	SAS	A1
Pentachlorophenol	ND		ug/kg	636	SW846 8270D	6/5/12	RMK	6/7/12 04:41	SAS	A1
Phenanthrene	ND		ug/kg	318	SW846 8270D	6/5/12	RMK	6/7/12 04:41	SAS	A1
Phenol	ND		ug/kg	1720	SW846 8270D	6/5/12	RMK	6/7/12 04:41	SAS	A1
Pyrene	594		ug/kg	318	SW846 8270D	6/5/12	RMK	6/7/12 04:41	SAS	A1
1,2,4-Trichlorobenzene	ND		ug/kg	636	SW846 8270D	6/5/12	RMK	6/7/12 04:41	SAS	A1
2,4,6-Trichlorophenol	ND		ug/kg	636	SW846 8270D	6/5/12	RMK	6/7/12 04:41	SAS	A1
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2,4,6-Tribromophenol (S)	88.1		%	37-123	SW846 8270D	6/5/12	RMK	6/7/12 04:41	SAS	A1
2-Fluorobiphenyl (S)	83.1		%	45-105	SW846 8270D	6/5/12	RMK	6/7/12 04:41	SAS	A1
2-Fluorophenol (S)	78.1		%	35-104	SW846 8270D	6/5/12	RMK	6/7/12 04:41	SAS	A1
Nitrobenzene-d5 (S)	87.1		%	41-110	SW846 8270D	6/5/12	RMK	6/7/12 04:41	SAS	A1
Phenol-d5 (S)	79.1		%	40-100	SW846 8270D	6/5/12	RMK	6/7/12 04:41	SAS	A1
Terphenyl-d14 (S)	162	3	%	38-113	SW846 8270D	6/5/12	RMK	6/7/12 04:41	SAS	A1
PCBs										
Total Polychlorinated Biphenyl	ND		mg/kg	0.21	SW846 8082A	6/5/12	MDO	6/5/12 22:16	EGO	A3
Aroclor-1016	ND		mg/kg	0.21	SW846 8082A	6/5/12	MDO	6/5/12 22:16	EGO	A3
Aroclor-1221	ND		mg/kg	0.21	SW846 8082A	6/5/12	MDO	6/5/12 22:16	EGO	A3
Aroclor-1232	ND		mg/kg	0.21	SW846 8082A	6/5/12	MDO	6/5/12 22:16	EGO	A3
Aroclor-1242	ND		mg/kg	0.21	SW846 8082A	6/5/12	MDO	6/5/12 22:16	EGO	A3
Aroclor-1248	ND		mg/kg	0.21	SW846 8082A	6/5/12	MDO	6/5/12 22:16	EGO	A3
Aroclor-1254	ND		mg/kg	0.21	SW846 8082A	6/5/12	MDO	6/5/12 22:16	EGO	A3
Aroclor-1260	ND		mg/kg	0.21	SW846 8082A	6/5/12	MDO	6/5/12 22:16	EGO	A3
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
Decachlorobiphenyl (S)	84.8		%	30-150	SW846 8082A	6/5/12	MDO	6/5/12 22:16	EGO	A3
Tetrachloro-m-xylene (S)	54.6		%	30-150	SW846 8082A	6/5/12	MDO	6/5/12 22:16	EGO	A3
PESTICIDES										
Aldrin	ND		ug/kg	220	SW846 8081B	6/5/12	MDO	6/7/12 11:03	KJH	A2
alpha-BHC	ND		ug/kg	220	SW846 8081B	6/5/12	MDO	6/7/12 11:03	KJH	A2
beta-BHC	ND		ug/kg	220	SW846 8081B	6/5/12	MDO	6/7/12 11:03	KJH	A2
delta-BHC	ND		ug/kg	220	SW846 8081B	6/5/12	MDO	6/7/12 11:03	KJH	A2

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: CT PH-0224 , DE ID 11 , GA 914 , MA PA0102 , MD 128 , LA 04162 , VA 421 , WY EPA Region 8 , WV 343

ANALYTICAL RESULTS

Workorder: 9970522 Priority Pollutants

Lab ID: **9970522003** Date Collected: 5/31/2012 06:30 Matrix: Solid

Sample ID: **Centrifuge Cake** Date Received: 6/1/2012 19:25

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
gamma-BHC	ND		ug/kg	220	SW846 8081B	6/5/12	MDO	6/7/12 11:03	KJH	A2
Chlordane	ND		ug/kg	9050	SW846 8081B	6/5/12	MDO	6/7/12 11:03	KJH	A2
4,4'-DDD	ND		ug/kg	427	SW846 8081B	6/5/12	MDO	6/7/12 11:03	KJH	A2
4,4'-DDE	ND		ug/kg	427	SW846 8081B	6/5/12	MDO	6/7/12 11:03	KJH	A2
4,4'-DDT	ND		ug/kg	427	SW846 8081B	6/5/12	MDO	6/7/12 11:03	KJH	A2
Dieldrin	ND		ug/kg	427	SW846 8081B	6/5/12	MDO	6/7/12 11:03	KJH	A2
Endosulfan I	ND		ug/kg	220	SW846 8081B	6/5/12	MDO	6/7/12 11:03	KJH	A2
Endosulfan II	ND		ug/kg	427	SW846 8081B	6/5/12	MDO	6/7/12 11:03	KJH	A2
Endosulfan Sulfate	ND		ug/kg	427	SW846 8081B	6/5/12	MDO	6/7/12 11:03	KJH	A2
Endrin	ND		ug/kg	427	SW846 8081B	6/5/12	MDO	6/7/12 11:03	KJH	A2
Endrin Aldehyde	ND		ug/kg	427	SW846 8081B	6/5/12	MDO	6/7/12 11:03	KJH	A2
Heptachlor	ND		ug/kg	220	SW846 8081B	6/5/12	MDO	6/7/12 11:03	KJH	A2
Heptachlor Epoxide	ND		ug/kg	220	SW846 8081B	6/5/12	MDO	6/7/12 11:03	KJH	A2
Toxaphene	ND		ug/kg	9050	SW846 8081B	6/5/12	MDO	6/7/12 11:03	KJH	A2
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
Decachlorobiphenyl (S)	108		%	30-150	SW846 8081B	6/5/12	MDO	6/7/12 11:03	KJH	A2
Tetrachloro-m-xylene (S)	88.7		%	30-131	SW846 8081B	6/5/12	MDO	6/7/12 11:03	KJH	A2
WET CHEMISTRY										
Cyanide, Total	ND		mg/kg	1.6	SW846 9012B	6/5/12	ARK	6/6/12 09:42	JEP	A4
Moisture	84.5		%	0.1	SM20-2540 G			6/7/12 16:00	KED	A
Phenolics	43.4	2	mg/kg	3.1	SW846 9066	6/12/12	SAM	6/12/12 10:37	SAM	A8
Total Solids	15.5		%	0.1	SM20-2540 G			6/7/12 16:00	KED	A
METALS										
Antimony, Total	ND		mg/kg	11.0	SW846 6010C	6/6/12	KMK	6/7/12 04:56	KMH	A5
Arsenic, Total	ND		mg/kg	11.0	SW846 6010C	6/6/12	KMK	6/7/12 04:56	KMH	A5
Beryllium, Total	ND		mg/kg	5.5	SW846 6010C	6/6/12	KMK	6/7/12 04:56	KMH	A5
Cadmium, Total	ND		mg/kg	2.7	SW846 6010C	6/6/12	KMK	6/7/12 04:56	KMH	A5
Chromium, Total	25.4		mg/kg	5.5	SW846 6010C	6/6/12	KMK	6/8/12 05:56	KMH	A5
Copper, Total	388		mg/kg	11.0	SW846 6010C	6/6/12	KMK	6/7/12 04:56	KMH	A5
Lead, Total	55.2		mg/kg	11.0	SW846 6010C	6/6/12	KMK	6/7/12 04:56	KMH	A5
Mercury, Total	1.1		mg/kg	0.27	SW846 7471B	6/8/12	MNP	6/8/12 12:20	MNP	A6
Nickel, Total	22.2		mg/kg	11.0	SW846 6010C	6/6/12	KMK	6/7/12 04:56	KMH	A5
Selenium, Total	ND		mg/kg	27.4	SW846 6010C	6/6/12	KMK	6/7/12 04:56	KMH	A5
Silver, Total	11.3		mg/kg	2.7	SW846 6010C	6/6/12	KMK	6/7/12 04:56	KMH	A5
Thallium, Total	ND		mg/kg	16.4	SW846 6010C	6/6/12	KMK	6/7/12 04:56	KMH	A5
Zinc, Total	563		mg/kg	11.0	SW846 6010C	6/6/12	KMK	6/7/12 04:56	KMH	A5

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: CT PH-0224 , DE ID 11 , GA 914 , MA PA0102 , MD 128 , LA 04162 , VA 421 , WY EPA Region 8 , WV 343

ANALYTICAL RESULTS

Workorder: 9970522 Priority Pollutants

Lab ID:	**9970522003**	Date Collected:	5/31/2012 06:30	Matrix:	Solid
Sample ID:	**Centrifuge Cake**	Date Received:	6/1/2012 19:25		

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed By	Cntr

Sample Comments:

One or more of the GCMS semi-volatile internal standards were recovered at <50%. The sample was reanalyzed with similar results indicating a sample matrix interference.

This sample was analyzed at a dilution in the 8081 Pesticide analysis due to sample matrix interference. Reporting limits were adjusted accordingly. One or more of the surrogates could not be evaluated as a result of the dilution.

Anna G Milliken
Technical Manager

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: CT PH-0224 , DE ID 11 , GA 914 , MA PA0102 , MD 128 , LA 04162 , VA 421 , WY EPA Region 8 , WV 343

ANALYTICAL RESULTS QUALIFIERS\FLAGS

Workorder: 9970522 Priority Pollutants

PARAMETER QUALIFIERS\FLAGS

[1] The QC sample type LCS for method EPA 625 was outside the control limits for the analyte 2-Chloronaphthalene. The % Recovery was reported as 51.4 and the control limits were 60 to 118.

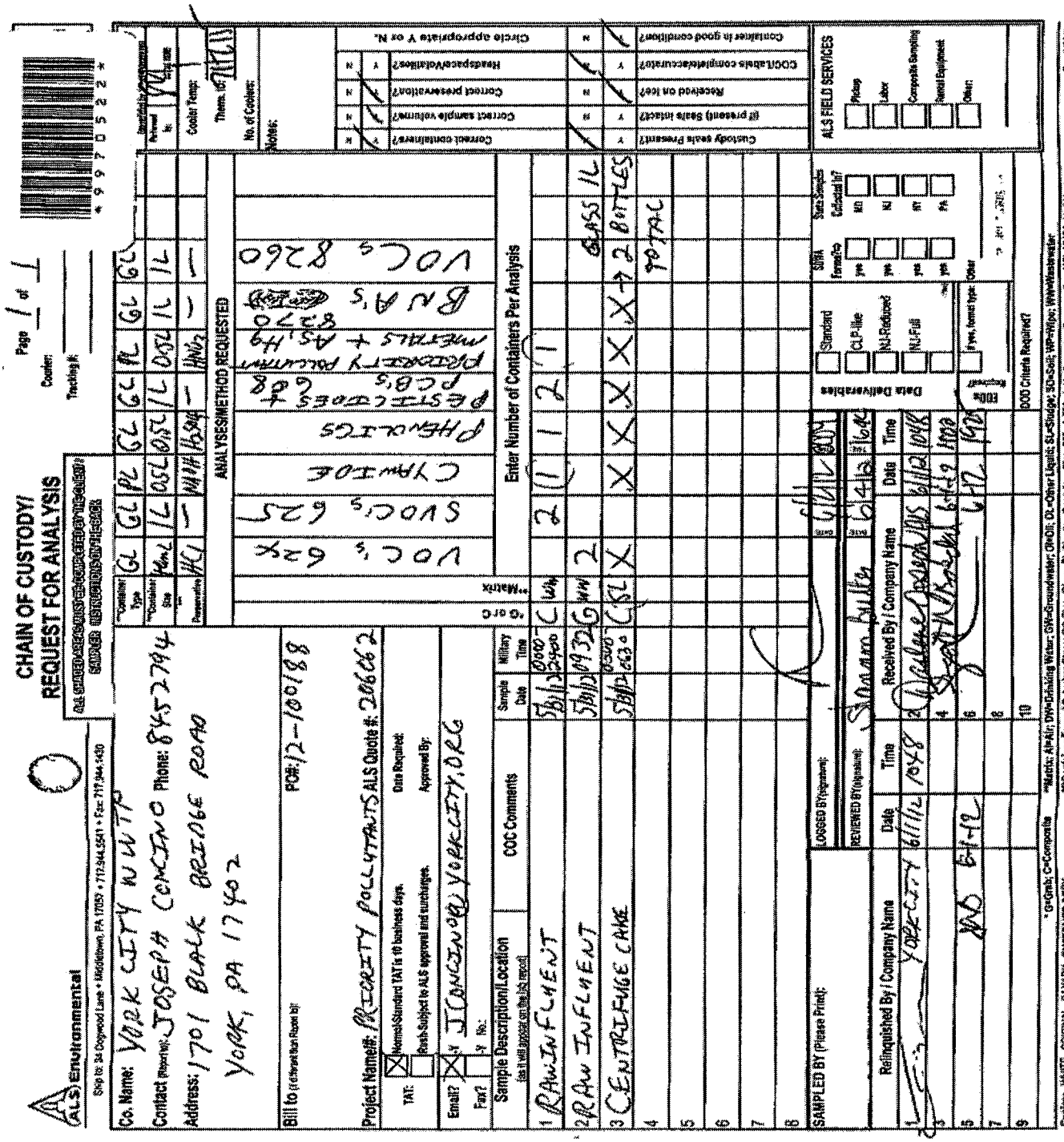
[2] The recovery of the Matrix Spike (MS) associated to this analyte was outside of the established control limits.

[3] The surrogate Terphenyl-d14 for method SW846 8270D was outside of control limits. The % Recovery was reported as 162 and the control limits were 38 to 113. This result was reported at a dilution of 1.

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: CT PH-0224 , DE ID 11 , GA 914 , MA PA0102 , MD 128 , LA 04162 , VA 421 , WY EPA Region 8 , WV 343



ALS Environmental Laboratory Locations Across North America

Canada: Burlington · Calgary · Centre of Excellence · Edmonton · Fort McMurray · Fort St. John · Grande Prairie · London · Mississauga · Richmond Hill · Saskatoon · Thunder Bay Vancouver Waterloo · Winnipeg · Yellowknife **United States:** Cincinnati · Everett · Fort Collins · Holland · Houston · Middletown · Salt Lake City · Spring City · York **Mexico:** Monterrey

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: CT PH-0224 , DE ID 11 , GA 914 , MA PA0102 , MD 128 , LA 04162 , VA 421 , WY EPA Region 8 , WV 343

September 12, 2012

8/23/12

Mr. Joe Concino
York, City of (WWTP)
1701 Blackridge Road
York, PA 17405

Certificate of Analysis

Project Name:	**PP SCANS AND LOCAL LIMITS -**	Workorder:	**9984517**
Purchase Order:	**12-100191**	Workorder ID:	**Local Limits 08/23/12**

Dear Mr. Concino,

Enclosed are the analytical results for samples received by the laboratory on Thursday, August 23, 2012.

The ALS Environmental laboratory in Middletown, Pennsylvania (formerly Analytical Laboratory Services, Inc.) 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 Shannon Butler (Project Coordinator) or Anna G Milliken (Technical Manager) at (717) 944-5541.

Please visit us at www.analyticallab.com for a listing of ALS' NELAP accreditations and Scope of Work, as well as other links to Water Quality documentation on the internet.

This laboratory report may not be reproduced, except in full, without the written approval of ALS Environmental.

This page is included as part of the Analytical Report and must be retained as a permanent record thereof.

Anna G Milliken
Technical Manager

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: CT PH-0224 , DE ID 11 , GA 914 , MA PA0102 , MD 128 , LA 04162 , VA 421 , WY EPA Region 8 , WV 343

SAMPLE SUMMARY

Workorder: 9984517 Local Limits 08/23/12 Discard Date: 09/26/2012

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
9984517001	Raw Influent	Waste Water	8/23/12 00:00	8/23/12 10:37	Customer
9984517002	002 Effluent	Waste Water	8/22/12 00:00	8/23/12 10:37	Customer
9984517003	Raw Influent	Waste Water	8/22/12 13:50	8/23/12 10:37	Customer
9984517004	002 Effluent	Waste Water	8/22/12 13:45	8/23/12 10:37	Customer
9984517005	Centrifuge Cake	Solid	8/22/12 07:00	8/23/12 10:37	Customer

Workorder Comments:

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 performed in the laboratory and are therefore analyzed out of hold time.

Standard Acronyms/Flags

J, B	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

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: CT PH-0224 , DE ID 11 , GA 914 , MA PA0102 , MD 128 , LA 04162 , VA 421 , WY EPA Region 8 , WV 343

ANALYTICAL RESULTS

Workorder: 9984517 Local Limits 08/23/12

Lab ID: **9984517001** Date Collected: 8/23/2012 00:00 Matrix: Waste Water

Sample ID: **Raw Influent** Date Received: 8/23/2012 10:37

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
WET CHEMISTRY										
Cyanide, Total	ND		mg/L	0.0050	EPA 335.4	8/30/12	JEP	8/30/12 15:46	KLR	A1
METALS										
Arsenic, Total	ND		mg/L	0.0050	EPA 200.7	8/29/12	KMK	8/31/12 08:52	JWK	B1
Cadmium, Total	ND		mg/L	0.0010	EPA 200.7	8/29/12	KMK	8/31/12 08:52	JWK	B1
Chromium, Total	0.0023		mg/L	0.0010	EPA 200.8	8/29/12	KMK	9/4/12 13:59	MWO	B2
Copper, Total	0.050		mg/L	0.0050	EPA 200.7	8/29/12	KMK	8/31/12 08:52	JWK	B1
Lead, Total	0.011		mg/L	0.0030	EPA 200.7	8/29/12	KMK	8/31/12 08:52	JWK	B1
Mercury, Total (Low-level)	0.00023		mg/L	0.00020	EPA 245.1	9/7/12	MNP	9/7/12 10:22	MNP	
Molybdenum, Total	0.032		mg/L	0.010	EPA 200.7	8/29/12	KMK	8/31/12 08:52	JWK	B1
Nickel, Total	0.0036		mg/L	0.0025	EPA 200.8	8/29/12	KMK	9/4/12 13:59	MWO	B2
Selenium, Total	ND		mg/L	0.0020	EPA 200.8	8/29/12	KMK	9/4/12 13:59	MWO	B2
Silver, Total	ND		mg/L	0.0010	EPA 200.8	8/29/12	KMK	9/4/12 13:59	MWO	B2
Zinc, Total	0.11		mg/L	0.010	EPA 200.7	8/29/12	KMK	8/31/12 08:52	JWK	B1

Sample Comments:

Anna G Milliken
Technical Manager

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: CT PH-0224 , DE ID 11 , GA 914 , MA PA0102 , MD 128 , LA 04162 , VA 421 , WY EPA Region 8 , WV 343

ANALYTICAL RESULTS

Workorder: 9984517 Local Limits 08/23/12

Lab ID: **9984517002** Date Collected: 8/22/2012 00:00 Matrix: Waste Water

Sample ID: **002 Effluent** Date Received: 8/23/2012 10:37

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
WET CHEMISTRY										
Cyanide, Total	ND		mg/L	0.0050	EPA 335.4	8/30/12	JEP	8/30/12 15:46	KLR	A1
METALS										
Arsenic, Total	ND		mg/L	0.0050	EPA 200.7	8/29/12	KMK	8/31/12 09:00	JWK	B1
Cadmium, Total	ND		mg/L	0.0010	EPA 200.7	8/29/12	KMK	8/31/12 09:00	JWK	B1
Chromium, Total	ND		mg/L	0.0010	EPA 200.8	8/29/12	KMK	9/4/12 14:10	MWO	B2
Copper, Total	ND		mg/L	0.0050	EPA 200.7	8/29/12	KMK	8/31/12 09:00	JWK	B1
Lead, Total	0.0034		mg/L	0.0030	EPA 200.7	8/29/12	KMK	8/31/12 09:00	JWK	B1
Mercury, Total (Low-level)	ND		mg/L	0.00020	EPA 245.1	9/7/12	MNP	9/7/12 10:23	MNP	
Molybdenum, Total	0.022		mg/L	0.010	EPA 200.7	8/29/12	KMK	8/31/12 09:00	JWK	B1
Nickel, Total	ND		mg/L	0.0025	EPA 200.8	8/29/12	KMK	9/4/12 14:10	MWO	B2
Selenium, Total	ND		mg/L	0.0020	EPA 200.8	8/29/12	KMK	9/4/12 14:10	MWO	B2
Silver, Total	ND		mg/L	0.0010	EPA 200.8	8/29/12	KMK	9/4/12 14:10	MWO	B2
Zinc, Total	0.027		mg/L	0.010	EPA 200.7	8/29/12	KMK	8/31/12 09:00	JWK	B1

Sample Comments:

Anna G Milliken
Technical Manager

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: CT PH-0224 , DE ID 11 , GA 914 , MA PA0102 , MD 128 , LA 04162 , VA 421 , WY EPA Region 8 , WV 343

ANALYTICAL RESULTS

Workorder: 9984517 Local Limits 08/23/12

Lab ID: **9984517003** Date Collected: 8/22/2012 13:50 Matrix: Waste Water

Sample ID: **Raw Influent** Date Received: 8/23/2012 10:37

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
WET CHEMISTRY										
Oil/Grease Hexane Extractable	20.6		mg/L	2.5	EPA 1664B			9/10/12 00:02	JJS	A

Sample Comments:

Anna G Milliken
Technical Manager

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: CT PH-0224 , DE ID 11 , GA 914 , MA PA0102 , MD 128 , LA 04162 , VA 421 , WY EPA Region 8 , WV 343

ANALYTICAL RESULTS

Workorder: 9984517 Local Limits 08/23/12

Lab ID: **9984517004** Date Collected: 8/22/2012 13:45 Matrix: Waste Water

Sample ID: **002 Effluent** Date Received: 8/23/2012 10:37

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
WET CHEMISTRY										
Oil/Grease Hexane Extractable	ND		mg/L	2.1	EPA 1664B			9/6/12 19:16	JSH	A

Sample Comments:

Anna G Milliken
Technical Manager

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: CT PH-0224 , DE ID 11 , GA 914 , MA PA0102 , MD 128 , LA 04162 , VA 421 , WY EPA Region 8 , WV 343

ANALYTICAL RESULTS

Workorder: 9984517 Local Limits 08/23/12

Lab ID: **9984517005** Date Collected: 8/22/2012 07:00 Matrix: Solid

Sample ID: **Centrifuge Cake** Date Received: 8/23/2012 10:37

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
WET CHEMISTRY										
Cyanide, Total	ND		mg/kg	1.5	SW846 9012B	8/27/12	JEP	8/27/12 13:27	JEP	A1
Hexane Extractable Material	2090		mg/kg	1230	SW846 9071B			9/5/12 13:00	NJA	A
Moisture	83.7		%	0.1	SM20-2540 G			9/1/12 07:50	NAK	A
Silica Gel Treated HEM	1780		mg/kg	1230	SW846 9071B			9/5/12 13:00	NJA	A
Total Solids	16.3		%	0.1	SM20-2540 G			9/1/12 07:50	NAK	A
METALS										
Arsenic, Total	ND		mg/kg	11.4	SW846 6010C	8/29/12	KMK	8/29/12 12:42	SRT	A3
Cadmium, Total	2.8		mg/kg	2.8	SW846 6010C	8/29/12	KMK	8/29/12 12:42	SRT	A3
Chromium, Total	26.6		mg/kg	5.7	SW846 6010C	8/29/12	KMK	8/29/12 12:42	SRT	A3
Copper, Total	492		mg/kg	11.4	SW846 6010C	8/29/12	KMK	8/29/12 12:42	SRT	A3
Lead, Total	104		mg/kg	11.4	SW846 6010C	8/29/12	KMK	8/29/12 12:42	SRT	A3
Mercury, Total	0.91		mg/kg	0.26	SW846 7471B	9/4/12	MNP	9/4/12 14:10	MNP	A4
Molybdenum, Total	24.0		mg/kg	11.4	SW846 6010C	8/29/12	KMK	8/29/12 12:42	SRT	A3
Nickel, Total	23.5		mg/kg	11.4	SW846 6010C	8/29/12	KMK	8/29/12 12:42	SRT	A3
Selenium, Total	ND		mg/kg	28.4	SW846 6010C	8/29/12	KMK	8/29/12 12:42	SRT	A3
Silver, Total	13.1		mg/kg	2.8	SW846 6010C	8/29/12	KMK	8/29/12 12:42	SRT	A3
Zinc, Total	779		mg/kg	11.4	SW846 6010C	8/29/12	KMK	8/29/12 12:42	SRT	A3

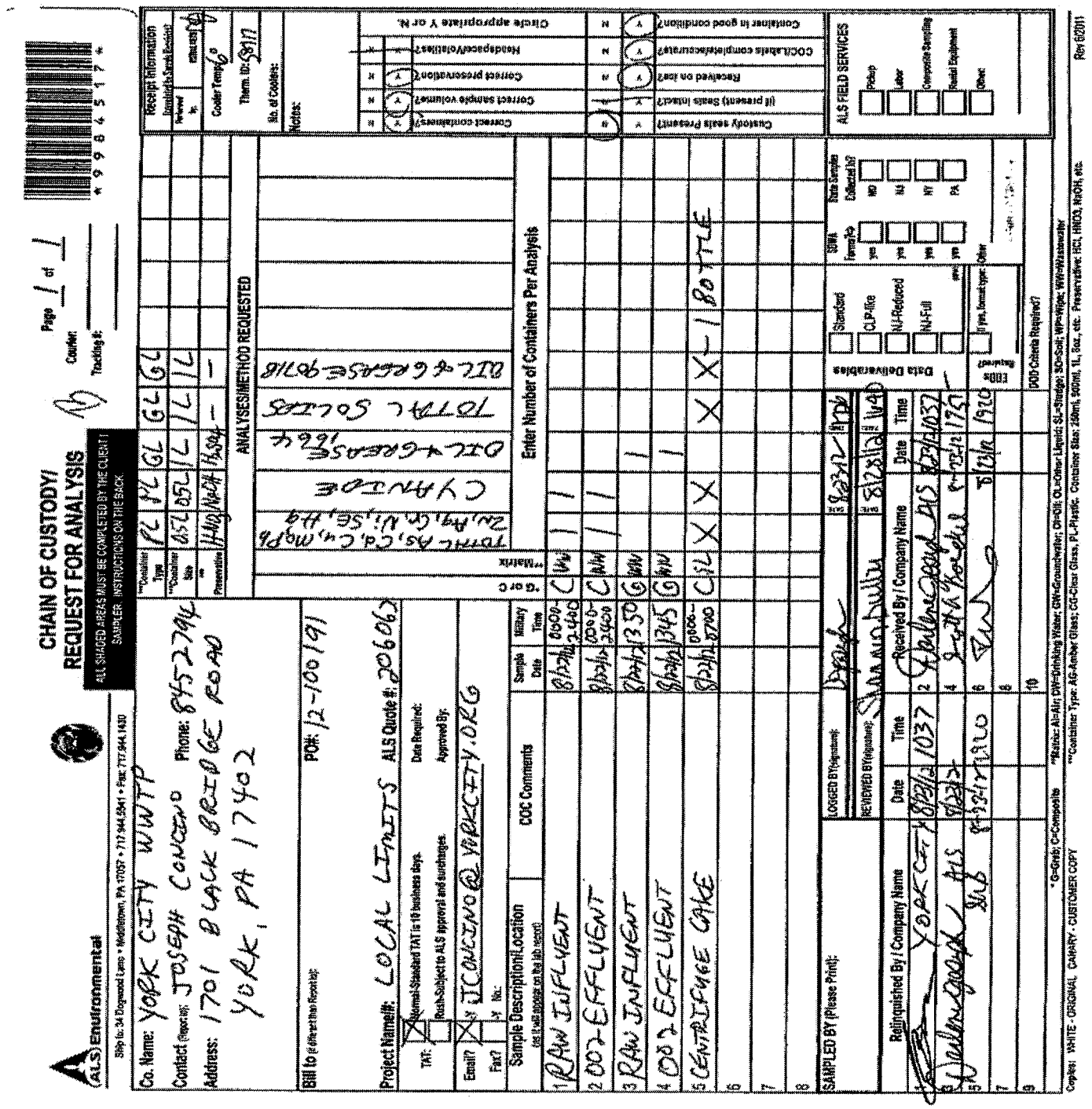
Sample Comments:

Anna G Milliken
Technical Manager

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: CT PH-0224 , DE ID 11 , GA 914 , MA PA0102 , MD 128 , LA 04162 , VA 421 , WY EPA Region 8 , WV 343



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: CT PH-0224 , DE ID 11 , GA 914 , MA PA0102 , MD 128 , LA 04162 , VA 421 , WY EPA Region 8 , WV 343

October 16, 2012

9/20/2013

Mr. Joe Concino
York, City of (WWTP)
1701 Blackridge Road
York, PA 17405

Certificate of Analysis

Project Name:	**2012-NPDES RENEWAL AND WETT**	Workorder:	**9990565**
Purchase Order:	**12-103737**	Workorder ID:	**NPDES Renewal 09/26/12**

Dear Mr. Concino,

Enclosed are the analytical results for samples received by the laboratory on Thursday, September 27, 2012.

The ALS Environmental laboratory in Middletown, Pennsylvania (formerly Analytical Laboratory Services, Inc.) 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 Shannon Butler (Project Coordinator) or Anna G Milliken (Technical Manager) at (717) 944-5541.

Please visit us at www.analyticallab.com for a listing of ALS' NELAP accreditations and Scope of Work, as well as other links to Water Quality documentation on the internet.

This laboratory report may not be reproduced, except in full, without the written approval of ALS Environmental.

This page is included as part of the Analytical Report and must be retained as a permanent record thereof.

Anna G Milliken
Technical Manager

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: CT PH-0224 , DE ID 11 , GA 914 , MA PA0102 , MD 128 , LA 04162 , VA 421 , WY EPA Region 8 , WV 343

SAMPLE SUMMARY

Workorder 9990565 NPDES Renewal 09/26/12 Discard Date: 10/30/2012

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
9990565001	002 Effluent	Waste Water	9/26/12 00:00	9/27/12 13:15	Customer
9990565002	002 Effluent	Waste Water	9/26/12 08:28	9/27/12 13:15	Customer

Workorder Comments:

This work order was modified to include the full volatile list of compounds on sample #9990565002. SRB 10/16/12.

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" not listed under the header "Field Parameters" are performed in the laboratory and are therefore analyzed out of hold time.

Standard Acronyms/Flags

J B	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

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: CT PH-0224 , DE ID 11 , GA 914 , MA PA0102 , MD 128 , LA 04162 , VA 421 , WY EPA Region 8 , WV 343

ANALYTICAL RESULTS

Workorder 9990565 NPDES Renewal 09/26/12

Lab ID: **9990565001** Date Collected: 9/26/2012 00:00 Matrix: Waste Water

Sample ID: **002 Effluent** Date Received: 9/27/2012 13:15

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
SEMIVOLATILES										
Acenaphthene	ND		ug/L	1.4	EPA 625	10/3/12	BKS	10/5/12 16:21	DHF	A1
Acenaphthylene	ND		ug/L	1.4	EPA 625	10/3/12	BKS	10/5/12 16:21	DHF	A1
Anthracene	ND		ug/L	1.4	EPA 625	10/3/12	BKS	10/5/12 16:21	DHF	A1
Benzidine	ND		ug/L	47.2	EPA 625	10/3/12	BKS	10/5/12 16:21	DHF	A1
Benzo(a)anthracene	ND		ug/L	1.4	EPA 625	10/3/12	BKS	10/5/12 16:21	DHF	A1
Benzo(a)pyrene	ND		ug/L	1.4	EPA 625	10/3/12	BKS	10/5/12 16:21	DHF	A1
Benzo(b)fluoranthene	ND		ug/L	1.4	EPA 625	10/3/12	BKS	10/5/12 16:21	DHF	A1
Benzo(g,h,i)perylene	ND		ug/L	1.4	EPA 625	10/3/12	BKS	10/5/12 16:21	DHF	A1
Benzo(k)fluoranthene	ND		ug/L	1.4	EPA 625	10/3/12	BKS	10/5/12 16:21	DHF	A1
4-Bromophenyl-phenylether	ND		ug/L	2.8	EPA 625	10/3/12	BKS	10/5/12 16:21	DHF	A1
Butylbenzylphthalate	ND		ug/L	2.8	EPA 625	10/3/12	BKS	10/5/12 16:21	DHF	A1
4-Chloro-3-methylphenol	ND		ug/L	7.5	EPA 625	10/3/12	BKS	10/5/12 16:21	DHF	A1
bis(2-Chloroethoxy)methane	ND		ug/L	2.8	EPA 625	10/3/12	BKS	10/5/12 16:21	DHF	A1
bis(2-Chloroethyl)ether	ND		ug/L	2.8	EPA 625	10/3/12	BKS	10/5/12 16:21	DHF	A1
bis(2-Chloroisopropyl)ether	ND		ug/L	2.8	EPA 625	10/3/12	BKS	10/5/12 16:21	DHF	A1
2-Chloronaphthalene	ND		ug/L	2.8	EPA 625	10/3/12	BKS	10/5/12 16:21	DHF	A1
2-Chlorophenol	ND		ug/L	7.5	EPA 625	10/3/12	BKS	10/5/12 16:21	DHF	A1
4-Chlorophenyl-phenylether	ND		ug/L	2.8	EPA 625	10/3/12	BKS	10/5/12 16:21	DHF	A1
Chrysene	ND		ug/L	1.4	EPA 625	10/3/12	BKS	10/5/12 16:21	DHF	A1
Di-n-Butylphthalate	ND		ug/L	2.8	EPA 625	10/3/12	BKS	10/5/12 16:21	DHF	A1
Di-n-Octylphthalate	ND		ug/L	7.5	EPA 625	10/3/12	BKS	10/5/12 16:21	DHF	A1
Dibenzo(a,h)anthracene	ND		ug/L	1.4	EPA 625	10/3/12	BKS	10/5/12 16:21	DHF	A1
3,3-Dichlorobenzidine	ND		ug/L	15.1	EPA 625	10/3/12	BKS	10/5/12 16:21	DHF	A1
2,4-Dichlorophenol	ND		ug/L	7.5	EPA 625	10/3/12	BKS	10/5/12 16:21	DHF	A1
Diethylphthalate	ND		ug/L	7.5	EPA 625	10/3/12	BKS	10/5/12 16:21	DHF	A1
2,4-Dimethylphenol	ND		ug/L	7.5	EPA 625	10/3/12	BKS	10/5/12 16:21	DHF	A1
Dimethylphthalate	ND		ug/L	7.5	EPA 625	10/3/12	BKS	10/5/12 16:21	DHF	A1
2,4-Dinitrophenol	ND		ug/L	15.1	EPA 625	10/3/12	BKS	10/5/12 16:21	DHF	A1
2,4-Dinitrotoluene	ND		ug/L	2.8	EPA 625	10/3/12	BKS	10/5/12 16:21	DHF	A1
2,6-Dinitrotoluene	ND		ug/L	2.8	EPA 625	10/3/12	BKS	10/5/12 16:21	DHF	A1
1,2-Diphenylhydrazine	ND		ug/L	2.8	EPA 625	10/3/12	BKS	10/5/12 16:21	DHF	A1
bis(2-Ethylhexyl)phthalate	ND		ug/L	2.8	EPA 625	10/3/12	BKS	10/5/12 16:21	DHF	A1
Fluoranthene	ND		ug/L	1.4	EPA 625	10/3/12	BKS	10/5/12 16:21	DHF	A1
Fluorene	ND		ug/L	1.4	EPA 625	10/3/12	BKS	10/5/12 16:21	DHF	A1
Hexachlorobenzene	ND		ug/L	2.8	EPA 625	10/3/12	BKS	10/5/12 16:21	DHF	A1
Hexachlorobutadiene	ND		ug/L	2.8	EPA 625	10/3/12	BKS	10/5/12 16:21	DHF	A1
Hexachlorocyclopentadiene	ND		ug/L	7.5	EPA 625	10/3/12	BKS	10/5/12 16:21	DHF	A1
Hexachloroethane	ND		ug/L	2.8	EPA 625	10/3/12	BKS	10/5/12 16:21	DHF	A1
Indeno(1,2,3-cd)pyrene	ND		ug/L	1.4	EPA 625	10/3/12	BKS	10/5/12 16:21	DHF	A1
Isophorone	ND		ug/L	2.8	EPA 625	10/3/12	BKS	10/5/12 16:21	DHF	A1

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: CT PH-0224 , DE ID 11 , GA 914 , MA PA0102 , MD 128 , LA 04162 , VA 421 , WY EPA Region 8 , WV 343

ANALYTICAL RESULTS

Workorder 9990565 NPDES Renewal 09/26/12

Lab ID: **9990565001** Date Collected: 9/26/2012 00:00 Matrix: Waste Water

Sample ID: **002 Effluent** Date Received: 9/27/2012 13:15

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
2-Methyl-4,6-dinitrophenol	ND		ug/L	7.5	EPA 625	10/3/12	BKS	10/5/12 16:21	DHF	A1
Naphthalene	ND		ug/L	1.4	EPA 625	10/3/12	BKS	10/5/12 16:21	DHF	A1
Nitrobenzene	ND		ug/L	2.8	EPA 625	10/3/12	BKS	10/5/12 16:21	DHF	A1
2-Nitrophenol	ND		ug/L	7.5	EPA 625	10/3/12	BKS	10/5/12 16:21	DHF	A1
4-Nitrophenol	ND		ug/L	7.5	EPA 625	10/3/12	BKS	10/5/12 16:21	DHF	A1
N-Nitrosodimethylamine	ND		ug/L	2.8	EPA 625	10/3/12	BKS	10/5/12 16:21	DHF	A1
N-Nitroso-di-n-propylamine	ND		ug/L	2.8	EPA 625	10/3/12	BKS	10/5/12 16:21	DHF	A1
N-Nitrosodiphenylamine	ND		ug/L	2.8	EPA 625	10/3/12	BKS	10/5/12 16:21	DHF	A1
Pentachlorophenol	ND		ug/L	15.1	EPA 625	10/3/12	BKS	10/5/12 16:21	DHF	A1
Phenanthrene	ND		ug/L	1.4	EPA 625	10/3/12	BKS	10/5/12 16:21	DHF	A1
Phenol	ND		ug/L	7.5	EPA 625	10/3/12	BKS	10/5/12 16:21	DHF	A1
Pyrene	ND		ug/L	1.4	EPA 625	10/3/12	BKS	10/5/12 16:21	DHF	A1
1,2,4-Trichlorobenzene	ND		ug/L	2.8	EPA 625	10/3/12	BKS	10/5/12 16:21	DHF	A1
2,4,6-Trichlorophenol	ND		ug/L	7.5	EPA 625	10/3/12	BKS	10/5/12 16:21	DHF	A1
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2,4,6-Tribromophenol (S)	75.1		%	38-134	EPA 625	10/3/12	BKS	10/5/12 16:21	DHF	A1
2-Fluorobiphenyl (S)	74.2		%	37-113	EPA 625	10/3/12	BKS	10/5/12 16:21	DHF	A1
2-Fluorophenol (S)	45.4		%	17-73	EPA 625	10/3/12	BKS	10/5/12 16:21	DHF	A1
Nitrobenzene-d5 (S)	75.3		%	37-124	EPA 625	10/3/12	BKS	10/5/12 16:21	DHF	A1
Phenol-d5 (S)	29.3		%	11-53	EPA 625	10/3/12	BKS	10/5/12 16:21	DHF	A1
Terphenyl-d14 (S)	92.3		%	33-125	EPA 625	10/3/12	BKS	10/5/12 16:21	DHF	A1
METALS										
Hardness	258		mg/L	0.33	EPA 200.7	10/3/12	KMK	10/5/12 13:46	JWK	
Aluminum, Total	ND		mg/L	0.050	EPA 200.7	10/3/12	KMK	10/5/12 13:46	JWK	C1
Antimony, Total	ND		mg/L	0.010	EPA 200.7	10/3/12	KMK	10/5/12 13:46	JWK	C1
Barium, Total	0.027		mg/L	0.0050	EPA 200.7	10/3/12	KMK	10/5/12 13:46	JWK	C1
Beryllium, Total	ND		mg/L	0.0020	EPA 200.7	10/3/12	KMK	10/5/12 13:46	JWK	C1
Boron, Total	0.16		mg/L	0.050	EPA 200.7	10/3/12	KMK	10/5/12 13:46	JWK	C1
Cobalt, Total	ND		mg/L	0.0025	EPA 200.7	10/3/12	KMK	10/5/12 13:46	JWK	C1
Iron, Total	0.045		mg/L	0.030	EPA 200.7	10/3/12	KMK	10/5/12 13:46	JWK	C1
Iron, Dissolved	ND		mg/L	0.060	EPA 200.7	10/2/12	JWK	10/2/12 17:45	JWK	E1
Manganese, Total	0.0047		mg/L	0.0025	EPA 200.7	10/3/12	KMK	10/5/12 13:46	JWK	C1
Thallium, Total	ND		mg/L	0.010	EPA 200.7	10/3/12	KMK	10/5/12 13:46	JWK	C1
WET CHEMISTRY										
Hexavalent Chromium	ND	1,2	mg/L	0.010	SM21-3500-Cr B			9/28/12 03:15	MSA	D

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: CT PH-0224 , DE ID 11 , GA 914 , MA PA0102 , MD 128 , LA 04162 , VA 421 , WY EPA Region 8 , WV 343

ANALYTICAL RESULTS

Workorder 9990565 NPDES Renewal 09/26/12

Lab ID: **9990565001** Date Collected: 9/26/2012 00:00 Matrix: Waste Water

Sample ID: **002 Effluent** Date Received: 9/27/2012 13:15

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr

Sample Comments:

Anna G Milliken
Technical Manager

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: CT PH-0224 , DE ID 11 , GA 914 , MA PA0102 , MD 128 , LA 04162 , VA 421 , WY EPA Region 8 , WV 343

ANALYTICAL RESULTS

Workorder 9990565 NPDES Renewal 09/26/12

Lab ID: **9990565002** Date Collected: 9/26/2012 08:28 Matrix: Waste Water

Sample ID: **002 Effluent** Date Received: 9/27/2012 13:15

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
VOLATILE ORGANICS										
Acrolein	ND		ug/L	30.0	EPA 624			9/29/12 03:37	TMP	C
Acrylonitrile	ND		ug/L	5.0	EPA 624			9/29/12 03:37	TMP	C
Benzene	ND		ug/L	1.0	EPA 624			9/29/12 03:37	TMP	C
Bromodichloromethane	ND		ug/L	1.0	EPA 624			9/29/12 03:37	TMP	C
Bromoform	ND		ug/L	2.0	EPA 624			9/29/12 03:37	TMP	C
Bromomethane	ND		ug/L	2.0	EPA 624			9/29/12 03:37	TMP	C
Carbon Tetrachloride	ND		ug/L	1.0	EPA 624			9/29/12 03:37	TMP	C
Chlorobenzene	ND		ug/L	1.0	EPA 624			9/29/12 03:37	TMP	C
Chlorodibromomethane	ND		ug/L	1.0	EPA 624			9/29/12 03:37	TMP	C
Chloroethane	ND		ug/L	1.0	EPA 624			9/29/12 03:37	TMP	C
2-Chloroethylvinyl ether	ND		ug/L	2.0	EPA 624			9/29/12 03:37	TMP	C
Chloroform	ND		ug/L	1.0	EPA 624			9/29/12 03:37	TMP	C
Chloromethane	ND		ug/L	1.0	EPA 624			9/29/12 03:37	TMP	C
1,2-Dichlorobenzene	ND		ug/L	1.0	EPA 624			9/29/12 03:37	TMP	C
1,3-Dichlorobenzene	ND		ug/L	1.0	EPA 624			9/29/12 03:37	TMP	C
1,4-Dichlorobenzene	ND		ug/L	1.0	EPA 624			9/29/12 03:37	TMP	C
Dichlorodifluoromethane	ND		ug/L	1.0	EPA 624			9/29/12 03:37	TMP	C
1,1-Dichloroethane	ND		ug/L	1.0	EPA 624			9/29/12 03:37	TMP	C
1,2-Dichloroethane	ND		ug/L	1.0	EPA 624			9/29/12 03:37	TMP	C
1,1-Dichloroethene	ND		ug/L	1.0	EPA 624			9/29/12 03:37	TMP	C
trans-1,2-Dichloroethene	ND		ug/L	1.0	EPA 624			9/29/12 03:37	TMP	C
1,2-Dichloropropane	ND		ug/L	1.0	EPA 624			9/29/12 03:37	TMP	C
1,3-Dichloropropene, Total	ND		ug/L	1.0	EPA 624			9/29/12 03:37	TMP	C
Ethylbenzene	ND		ug/L	1.0	EPA 624			9/29/12 03:37	TMP	C
Methylene Chloride	ND		ug/L	1.0	EPA 624			9/29/12 03:37	TMP	C
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	EPA 624			9/29/12 03:37	TMP	C
Tetrachloroethene	ND		ug/L	1.0	EPA 624			9/29/12 03:37	TMP	C
Toluene	ND		ug/L	1.0	EPA 624			9/29/12 03:37	TMP	C
1,1,1-Trichloroethane	ND		ug/L	1.0	EPA 624			9/29/12 03:37	TMP	C
1,1,2-Trichloroethane	ND		ug/L	1.0	EPA 624			9/29/12 03:37	TMP	C
Trichloroethene	ND		ug/L	1.0	EPA 624			9/29/12 03:37	TMP	C
Vinyl Chloride	ND		ug/L	2.0	EPA 624			9/29/12 03:37	TMP	C
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	97.7		%	72-142	EPA 624			9/29/12 03:37	TMP	C
4-Bromofluorobenzene (S)	85.2		%	73-119	EPA 624			9/29/12 03:37	TMP	C
Dibromofluoromethane (S)	93.2		%	74-132	EPA 624			9/29/12 03:37	TMP	C
Toluene-d8 (S)	104		%	75-133	EPA 624			9/29/12 03:37	TMP	C

WET CHEMISTRY

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: CT PH-0224 , DE ID 11 , GA 914 , MA PA0102 , MD 128 , LA 04162 , VA 421 , WY EPA Region 8 , WV 343

ANALYTICAL RESULTS

Workorder 9990565 NPDES Renewal 09/26/12

Lab ID: **9990565002** Date Collected: 9/26/2012 08:28 Matrix: Waste Water

Sample ID: **002 Effluent** Date Received: 9/27/2012 13:15

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
Cyanide Weak/Dissociable(Free)	ND		mg/L	0.0050	SM20-4500CNI	10/2/12	SYB	10/3/12 14:25	JEP	A1
Phenolics	ND		mg/L	0.005	EPA 420 4	10/10/12	KLR	10/10/12 13:07	KLR	B

Sample Comments:

Anna G Milliken
Technical Manager

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: CT PH-0224 , DE ID 11 , GA 914 , MA PA0102 , MD 128 , LA 04162 , VA 421 , WY EPA Region 8 , WV 343

ANALYTICAL RESULTS QUALIFIERS\FLAGS

Workorder 9990565 NPDES Renewal 09/26/12

PARAMETER QUALIFIERS\FLAGS

[1] The recovery of the Matrix Spike (MS) associated to this analyte was outside of the established control limits.

[2] Analyte was analyzed past the 24 hour holding time.

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: CT PH-0224, DE ID 11, GA 914, MA PA0102, MD 128, LA 04162, VA 421, WY EPA Region 8, WV 343

ALS Environmental
Ship to: 34 Dogwood Lane • Middletown, PA 17057 • 717 944 5541 • Fax: 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 #: X

9990565

Co. Name: YORK CITY WWTP
Contact (Report to): JOSEPH CONCINO Phone: 845-2794
Address: 1701 BLACK BRIDGE ROAD
YORK, PA 17402

Bill to (if different than Report to): PO#: 12-103737

Project Name/#: NPDES RENEWAL ALS Quote #: 325505

TAT: [X] Normal-Standard TAT is 10 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	GL	GL	PL	PL	PL	PL											
***Container Size	1L	0.5L	40mL	200mL	0.5L	0.5L	0.5L											
***Preservative	—	H_2SO_4	HCl	—	HNO_3	—	NaOH											

ANALYSES/METHOD REQUESTED

Enter Number of Containers Per Analysis

	Sample Description/Location (as it will appear on the lab report)	COC Comments	Sample Date	Military Time	*G or C	**Matrix	EPA 625	PHENOLICS	624 VOLATILES	DISSOLVED FE (FILTERED)	HARDNESS + TOTAL METALS	HEXAVALENT CHROMIUM	CYANIDE FREE + TOTAL						
1	002 EFFLUENT		9/26/12	0000-2400	C	WW	2			1	1	1	2						
2	002 EFFLUENT		9/26/12	0828	G	WW		1	2				1						
3																			
4																			
5																			
6																			
7																			
8																			

Performed by: INITIAL HERE DG
Cooler Temp: 6°
Therm. ID: 58717
No. of Coolers:
Notes:

Correct containers? Y N
Correct sample volume? Y N
Correct preservation? Y N
Headspace/Volatiles? Y N
Circle appropriate Y or 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):
LOGGED BY (signature): [signature] DATE 9/27 TIME 2225
REVIEWED BY (signature): Shannon Bulley DATE 10/4/12 TIME 1650

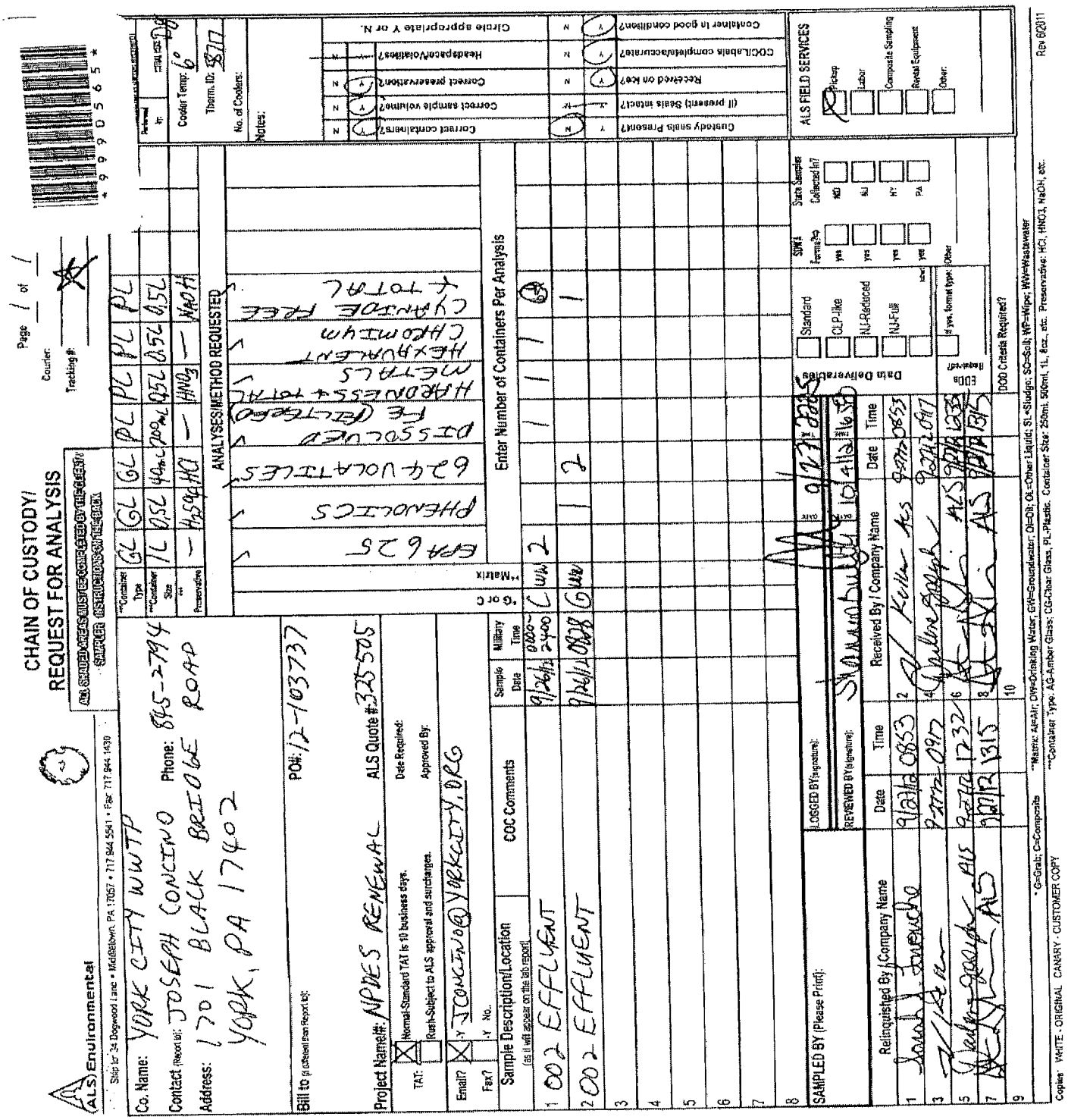
	Relinquished By / Company Name	Date	Time		Received By / Company Name	Date	Time
1	Sarah J. Lavouche	9/27/12	0853	2	[signature] Keller ALS	9/27/12	0853
3	[signature] Keller	9/27/12	0917	4	Darlene Joseph	9/27/12	0917
5	Darlene Joseph ALS	9/27/12	1232	6	[signature] ALS	9/27/12	1235
7	[signature] ALS	9/27/12	1315	8	[signature] ALS	9/27/12	1315
9				10			

Data Deliverables: [ ] Standard [ ] CLP-like [ ] NJ-Reduced [ ] NJ-Full [ ] new
EDDs Required? [ ] If yes, format type:
SDWA Forms? yes yes yes yes
State Sampler Collected In? MD NJ NY PA Other
DOD Criteria Required?

ALS FIELD SERVICES: [X] 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 6/2011



ALS Environmental Laboratory Locations Across North America
Canada: Burlington · Calgary · Centre of Excellence · Edmonton · Fort McMurray · Fort St. John · Grande Prairie · London · Mississauga · Richmond Hill · Saskatoon · Thunder Bay · Vancouver Waterloo · Winnipeg · Yellowknife United States: Cincinnati · Everett · Fort Collins · Holland · Houston Middletown · Salt Lake City Spring City · York Mexico: Monterrey
Report ID: 9990565 - 10/16/2012
Page 9 of 9

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: CT PH-0224 , DE ID 11 , GA 914 , MA PA0102 , MD 128 , LA 04162 , VA 421 , WY EPA Region 8 , WV 343

December 27, 2012

11/13/12

Mr. Joe Concino
York, City of (WWTP)
1701 Blackridge Road
York, PA 17405

Certificate of Analysis

Project Name:	**2012-NPDES RENEWAL AND WETT**	Workorder:	**9997924**
Purchase Order:		Workorder ID:	**NPDES Renewal 11/13/12** A

Dear Mr. Concino,

Enclosed are the analytical results for samples received by the laboratory on Tuesday, November 13, 2012.

The ALS Environmental laboratory in Middletown, Pennsylvania (formerly Analytical Laboratory Services, Inc.) 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 Shannon Butler (Project Coordinator) or Anna G Milliken (Technical Manager) at (717) 944-5541.

Please visit us at www.analyticallab.com for a listing of ALS' NELAP accreditations and Scope of Work, as well as other links to Water Quality documentation on the internet.

This laboratory report may not be reproduced, except in full, without the written approval of ALS Environmental.

This page is included as part of the Analytical Report and must be retained as a permanent record thereof.

Anna G Milliken
Technical Manager

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: CT PH-0224 , DE ID 11 , GA 914 , MA PA0102 , MD 128 , LA 04162 , VA 421 , WY EPA Region 8 , WV 343

SAMPLE SUMMARY

Workorder: 9997924 NPDES Renewal 11/13/12 Discard Date: 01/10/2013

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
9997924001	002 Effluent Composite	Waste Water	11/12/12 00:00	11/13/12 09:22	Customer
9997924002	002 Effluent Grab	Waste Water	11/12/12 09:30	11/13/12 09:22	Customer

Workorder Comments:

This work order was modified to include additional volatile compounds. SRB 12/17/12.

This work order was modified to include additional semi-volatile compounds. SRB 12/20/12.

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 performed in the laboratory and are therefore analyzed out of hold time.

Standard Acronyms/Flags

J, B	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

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: CT PH-0224 , DE ID 11 , GA 914 , MA PA0102 , MD 128 , LA 04162 , VA 421 , WY EPA Region 8 , WV 343

ANALYTICAL RESULTS

Workorder: 9997924 NPDES Renewal 11/13/12

Lab ID: **9997924001** Date Collected: 11/12/2012 00:00 Matrix: Waste Water

Sample ID: **002 Effluent Composite** Date Received: 11/13/2012 09:22

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
SEMIVOLATILES										
Acenaphthene	ND		ug/L	1.4	EPA 625	11/14/12	GEC	11/16/12 12:04	DHF	D
Acenaphthylene	ND		ug/L	1.4	EPA 625	11/14/12	GEC	11/16/12 12:04	DHF	D
Anthracene	ND		ug/L	1.4	EPA 625	11/14/12	GEC	11/16/12 12:04	DHF	D
Benzidine	ND		ug/L	46.9	EPA 625	11/14/12	GEC	11/16/12 12:04	DHF	D
Benzo(a)anthracene	ND		ug/L	1.4	EPA 625	11/14/12	GEC	11/16/12 12:04	DHF	D
Benzo(a)pyrene	ND		ug/L	1.4	EPA 625	11/14/12	GEC	11/16/12 12:04	DHF	D
Benzo(b)fluoranthene	ND		ug/L	1.4	EPA 625	11/14/12	GEC	11/16/12 12:04	DHF	D
Benzo(g,h,i)perylene	ND		ug/L	1.4	EPA 625	11/14/12	GEC	11/16/12 12:04	DHF	D
Benzo(k)fluoranthene	ND		ug/L	1.4	EPA 625	11/14/12	GEC	11/16/12 12:04	DHF	D
4-Bromophenyl-phenylether	ND		ug/L	2.8	EPA 625	11/14/12	GEC	11/16/12 12:04	DHF	D
Butylbenzylphthalate	ND		ug/L	2.8	EPA 625	11/14/12	GEC	11/16/12 12:04	DHF	D
4-Chloro-3-methylphenol	ND		ug/L	7.5	EPA 625	11/14/12	GEC	11/16/12 12:04	DHF	D
bis(2-Chloroethoxy)methane	ND		ug/L	2.8	EPA 625	11/14/12	GEC	11/16/12 12:04	DHF	D
bis(2-Chloroethyl)ether	ND		ug/L	2.8	EPA 625	11/14/12	GEC	11/16/12 12:04	DHF	D
bis(2-Chloroisopropyl)ether	ND		ug/L	2.8	EPA 625	11/14/12	GEC	11/16/12 12:04	DHF	D
2-Chloronaphthalene	ND		ug/L	2.8	EPA 625	11/14/12	GEC	11/16/12 12:04	DHF	D
2-Chlorophenol	ND		ug/L	7.5	EPA 625	11/14/12	GEC	11/16/12 12:04	DHF	D
4-Chlorophenyl-phenylether	ND		ug/L	2.8	EPA 625	11/14/12	GEC	11/16/12 12:04	DHF	D
Chrysene	ND		ug/L	1.4	EPA 625	11/14/12	GEC	11/16/12 12:04	DHF	D
Di-n-Butylphthalate	ND		ug/L	2.8	EPA 625	11/14/12	GEC	11/16/12 12:04	DHF	D
Di-n-Octylphthalate	ND		ug/L	7.5	EPA 625	11/14/12	GEC	11/16/12 12:04	DHF	D
Dibenzo(a,h)anthracene	ND		ug/L	1.4	EPA 625	11/14/12	GEC	11/16/12 12:04	DHF	D
3,3-Dichlorobenzidine	ND		ug/L	15.0	EPA 625	11/14/12	GEC	11/16/12 12:04	DHF	D
2,4-Dichlorophenol	ND		ug/L	7.5	EPA 625	11/14/12	GEC	11/16/12 12:04	DHF	D
Diethylphthalate	ND		ug/L	7.5	EPA 625	11/14/12	GEC	11/16/12 12:04	DHF	D
2,4-Dimethylphenol	ND		ug/L	7.5	EPA 625	11/14/12	GEC	11/16/12 12:04	DHF	D
2,4-Dinitrophenol	ND		ug/L	15.0	EPA 625	11/14/12	GEC	11/16/12 12:04	DHF	D
2,4-Dinitrotoluene	ND		ug/L	2.8	EPA 625	11/14/12	GEC	11/16/12 12:04	DHF	D
2,6-Dinitrotoluene	ND		ug/L	2.8	EPA 625	11/14/12	GEC	11/16/12 12:04	DHF	D
1,2-Diphenylhydrazine	ND		ug/L	2.8	EPA 625	11/14/12	GEC	11/16/12 12:04	DHF	D
bis(2-Ethylhexyl)phthalate	ND		ug/L	2.8	EPA 625	11/14/12	GEC	11/16/12 12:04	DHF	D
Fluoranthene	ND		ug/L	1.4	EPA 625	11/14/12	GEC	11/16/12 12:04	DHF	D
Fluorene	ND		ug/L	1.4	EPA 625	11/14/12	GEC	11/16/12 12:04	DHF	D
Hexachlorobenzene	ND		ug/L	2.8	EPA 625	11/14/12	GEC	11/16/12 12:04	DHF	D
Hexachlorobutadiene	ND		ug/L	2.8	EPA 625	11/14/12	GEC	11/16/12 12:04	DHF	D
Hexachlorocyclopentadiene	ND		ug/L	7.5	EPA 625	11/14/12	GEC	11/16/12 12:04	DHF	D
Hexachloroethane	ND		ug/L	2.8	EPA 625	11/14/12	GEC	11/16/12 12:04	DHF	D
Indeno(1,2,3-cd)pyrene	ND		ug/L	1.4	EPA 625	11/14/12	GEC	11/16/12 12:04	DHF	D
Isophorone	ND		ug/L	2.8	EPA 625	11/14/12	GEC	11/16/12 12:04	DHF	D
2-Methyl-4,6-dinitrophenol	ND		ug/L	7.5	EPA 625	11/14/12	GEC	11/16/12 12:04	DHF	D

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: CT PH-0224 , DE ID 11 , GA 914 , MA PA0102 , MD 128 , LA 04162 , VA 421 , WY EPA Region 8 , WV 343

ANALYTICAL RESULTS

Workorder: 9997924 NPDES Renewal 11/13/12

Lab ID: **9997924001** Date Collected: 11/12/2012 00:00 Matrix: Waste Water

Sample ID: **002 Effluent Composite** Date Received: 11/13/2012 09:22

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
Naphthalene	ND		ug/L	1.4	EPA 625	11/14/12	GEC	11/16/12 12:04	DHF	D
Nitrobenzene	ND		ug/L	2.8	EPA 625	11/14/12	GEC	11/16/12 12:04	DHF	D
2-Nitrophenol	ND		ug/L	7.5	EPA 625	11/14/12	GEC	11/16/12 12:04	DHF	D
4-Nitrophenol	ND		ug/L	7.5	EPA 625	11/14/12	GEC	11/16/12 12:04	DHF	D
N-Nitrosodimethylamine	ND		ug/L	2.8	EPA 625	11/14/12	GEC	11/16/12 12:04	DHF	D
N-Nitroso-di-n-propylamine	ND		ug/L	2.8	EPA 625	11/14/12	GEC	11/16/12 12:04	DHF	D
N-Nitrosodiphenylamine	ND		ug/L	2.8	EPA 625	11/14/12	GEC	11/16/12 12:04	DHF	D
Pentachlorophenol	ND		ug/L	15.0	EPA 625	11/14/12	GEC	11/16/12 12:04	DHF	D
Phenanthrene	ND		ug/L	1.4	EPA 625	11/14/12	GEC	11/16/12 12:04	DHF	D
Phenol	ND		ug/L	7.5	EPA 625	11/14/12	GEC	11/16/12 12:04	DHF	D
Pyrene	ND		ug/L	1.4	EPA 625	11/14/12	GEC	11/16/12 12:04	DHF	D
1,2,4-Trichlorobenzene	ND		ug/L	2.8	EPA 625	11/14/12	GEC	11/16/12 12:04	DHF	D
2,4,6-Trichlorophenol	ND		ug/L	7.5	EPA 625	11/14/12	GEC	11/16/12 12:04	DHF	D
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2,4,6-Tribromophenol (S)	64.3		%	38-134	EPA 625	11/14/12	GEC	11/16/12 12:04	DHF	D
2-Fluorobiphenyl (S)	75.8		%	37-113	EPA 625	11/14/12	GEC	11/16/12 12:04	DHF	D
2-Fluorophenol (S)	45.2		%	17-73	EPA 625	11/14/12	GEC	11/16/12 12:04	DHF	D
Nitrobenzene-d5 (S)	69.7		%	37-124	EPA 625	11/14/12	GEC	11/16/12 12:04	DHF	D
Phenol-d5 (S)	31		%	11-53	EPA 625	11/14/12	GEC	11/16/12 12:04	DHF	D
Terphenyl-d14 (S)	96.1		%	33-125	EPA 625	11/14/12	GEC	11/16/12 12:04	DHF	D
METALS										
Aluminum, Total	ND		mg/L	0.050	EPA 200.7	11/15/12	KMK	11/20/12 06:14	JWK	A1
Antimony, Total	ND		mg/L	0.010	EPA 200.7	11/15/12	KMK	11/20/12 06:14	JWK	A1
Barium, Total	0.023		mg/L	0.0050	EPA 200.7	11/15/12	KMK	11/20/12 06:14	JWK	A1
Beryllium, Total	ND		mg/L	0.0020	EPA 200.7	11/15/12	KMK	11/20/12 06:14	JWK	A1
Boron, Total	0.14		mg/L	0.050	EPA 200.7	11/15/12	KMK	11/20/12 06:14	JWK	A1
Cobalt, Total	ND		mg/L	0.0025	EPA 200.7	11/15/12	KMK	11/20/12 06:14	JWK	A1
Iron, Total	0.033		mg/L	0.030	EPA 200.7	11/15/12	KMK	11/20/12 06:14	JWK	A1
Iron, Dissolved	ND		mg/L	0.060	EPA 200.7	11/15/12	JWK	11/15/12 08:57	JWK	C1
Manganese, Total	0.0026		mg/L	0.0025	EPA 200.7	11/15/12	KMK	11/20/12 06:14	JWK	A1
Thallium, Total	ND		mg/L	0.010	EPA 200.7	11/15/12	KMK	11/20/12 06:14	JWK	A1
WET CHEMISTRY										
Hardness	213		mg/L	5	SM20-2340 C			11/15/12 10:00	NJA	A
Hexavalent Chromium	ND	1	mg/L	0.010	SM21-3500-Cr B			11/14/12 04:00	MSA	B

Sample Comments:

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: CT PH-0224 , DE ID 11 , GA 914 , MA PA0102 , MD 128 , LA 04162 , VA 421 , WY EPA Region 8 , WV 343

ANALYTICAL RESULTS

Workorder: 9997924 NPDES Renewal 11/13/12

Lab ID: **9997924001**
Sample ID: **002 Effluent Composite**

Date Collected: 11/12/2012 00:00
Date Received: 11/13/2012 09:22

Matrix: Waste Water

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr

Anna G Milliken
Technical Manager

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: CT PH-0224 , DE ID 11 , GA 914 , MA PA0102 , MD 128 , LA 04162 , VA 421 , WY EPA Region 8 , WV 343

ANALYTICAL RESULTS

Workorder: 9997924 NPDES Renewal 11/13/12

Lab ID: **9997924002** Date Collected: 11/12/2012 09:30 Matrix: Waste Water

Sample ID: **002 Effluent Grab** Date Received: 11/13/2012 09:22

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
VOLATILE ORGANICS										
Acrolein	ND		ug/L	30.0	EPA 624			11/16/12 04:00	DRS	C
Acrylonitrile	ND		ug/L	5.0	EPA 624			11/16/12 04:00	DRS	C
Benzene	ND		ug/L	1.0	EPA 624			11/16/12 04:00	DRS	C
Bromodichloromethane	ND		ug/L	1.0	EPA 624			11/16/12 04:00	DRS	C
Bromoform	ND		ug/L	2.0	EPA 624			11/16/12 04:00	DRS	C
Bromomethane	ND		ug/L	2.0	EPA 624			11/16/12 04:00	DRS	C
Carbon Tetrachloride	ND		ug/L	1.0	EPA 624			11/16/12 04:00	DRS	C
Chlorobenzene	ND		ug/L	1.0	EPA 624			11/16/12 04:00	DRS	C
Chlorodibromomethane	ND		ug/L	1.0	EPA 624			11/16/12 04:00	DRS	C
Chloroethane	ND		ug/L	1.0	EPA 624			11/16/12 04:00	DRS	C
2-Chloroethylvinyl ether	ND		ug/L	2.0	EPA 624			11/16/12 04:00	DRS	C
Chloroform	ND		ug/L	1.0	EPA 624			11/16/12 04:00	DRS	C
Chloromethane	ND		ug/L	1.0	EPA 624			11/16/12 04:00	DRS	C
1,2-Dichlorobenzene	ND		ug/L	1.0	EPA 624			11/16/12 04:00	DRS	C
1,3-Dichlorobenzene	ND		ug/L	1.0	EPA 624			11/16/12 04:00	DRS	C
1,4-Dichlorobenzene	ND		ug/L	1.0	EPA 624			11/16/12 04:00	DRS	C
Dichlorodifluoromethane	ND		ug/L	1.0	EPA 624			11/16/12 04:00	DRS	C
1,1-Dichloroethane	ND		ug/L	1.0	EPA 624			11/16/12 04:00	DRS	C
1,2-Dichloroethane	ND		ug/L	1.0	EPA 624			11/16/12 04:00	DRS	C
1,1-Dichloroethene	ND		ug/L	1.0	EPA 624			11/16/12 04:00	DRS	C
trans-1,2-Dichloroethene	ND		ug/L	1.0	EPA 624			11/16/12 04:00	DRS	C
1,2-Dichloropropane	ND		ug/L	1.0	EPA 624			11/16/12 04:00	DRS	C
1,3-Dichloropropene, Total	ND		ug/L	1.0	EPA 624			11/16/12 04:00	DRS	C
Ethylbenzene	ND		ug/L	1.0	EPA 624			11/16/12 04:00	DRS	C
Methylene Chloride	ND		ug/L	1.0	EPA 624			11/16/12 04:00	DRS	C
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	EPA 624			11/16/12 04:00	DRS	C
Tetrachloroethene	ND		ug/L	1.0	EPA 624			11/16/12 04:00	DRS	C
Toluene	ND		ug/L	1.0	EPA 624			11/16/12 04:00	DRS	C
1,1,1-Trichloroethane	ND		ug/L	1.0	EPA 624			11/16/12 04:00	DRS	C
1,1,2-Trichloroethane	ND		ug/L	1.0	EPA 624			11/16/12 04:00	DRS	C
Trichloroethene	ND		ug/L	1.0	EPA 624			11/16/12 04:00	DRS	C
Vinyl Chloride	ND		ug/L	2.0	EPA 624			11/16/12 04:00	DRS	C
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	77.9		%	72-142	EPA 624			11/16/12 04:00	DRS	C
4-Bromofluorobenzene (S)	80.8		%	73-119	EPA 624			11/16/12 04:00	DRS	C
Dibromofluoromethane (S)	84.9		%	74-132	EPA 624			11/16/12 04:00	DRS	C
Toluene-d8 (S)	101		%	75-133	EPA 624			11/16/12 04:00	DRS	C

WET CHEMISTRY

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: CT PH-0224 , DE ID 11 , GA 914 , MA PA0102 , MD 128 , LA 04162 , VA 421 , WY EPA Region 8 , WV 343

ANALYTICAL RESULTS

Workorder: 9997924 NPDES Renewal 11/13/12

Lab ID: **9997924002** Date Collected: 11/12/2012 09:30 Matrix: Waste Water

Sample ID: **002 Effluent Grab** Date Received: 11/13/2012 09:22

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
Cyanide, Total	ND		mg/L	0.0050	EPA 335.4	11/25/12	SYB	11/26/12 10:38	JEP	A1
Phenolics	ND		mg/L	0.005	EPA 420.4	11/28/12	SYB	11/29/12 10:47	JPA	B
SUBCONTRACTED ANALYSIS										
Subcontracted Analysis	See Attached				Subcontract			12/14/12 12:59	CLT	

Sample Comments:

See attached subcontracted results from Hampton Clarke - Veritech for free cyanide results. SRB 12/14/12.

Anna G Milliken
Technical Manager

ANALYTICAL RESULTS QUALIFIERS\FLAGS

Workorder: 9997924 NPDES Renewal 11/13/12

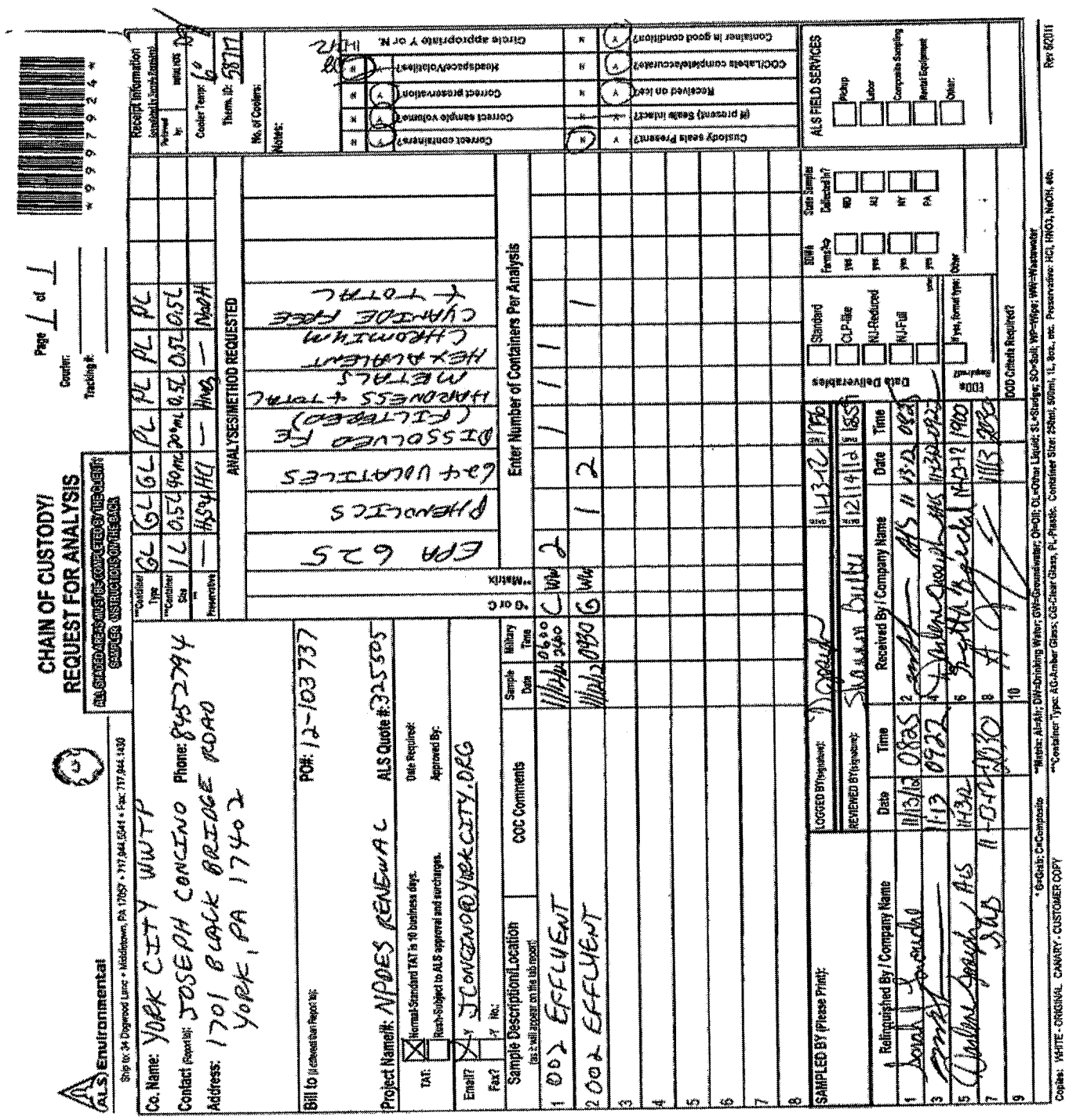
PARAMETER QUALIFIERS\FLAGS

[1] Analyte was analyzed past the 24 hour holding time.

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: CT PH-0224 , DE ID 11 , GA 914 , MA PA0102 , MD 128 , LA 04162 , VA 421 , WY EPA Region 8 , WV 343



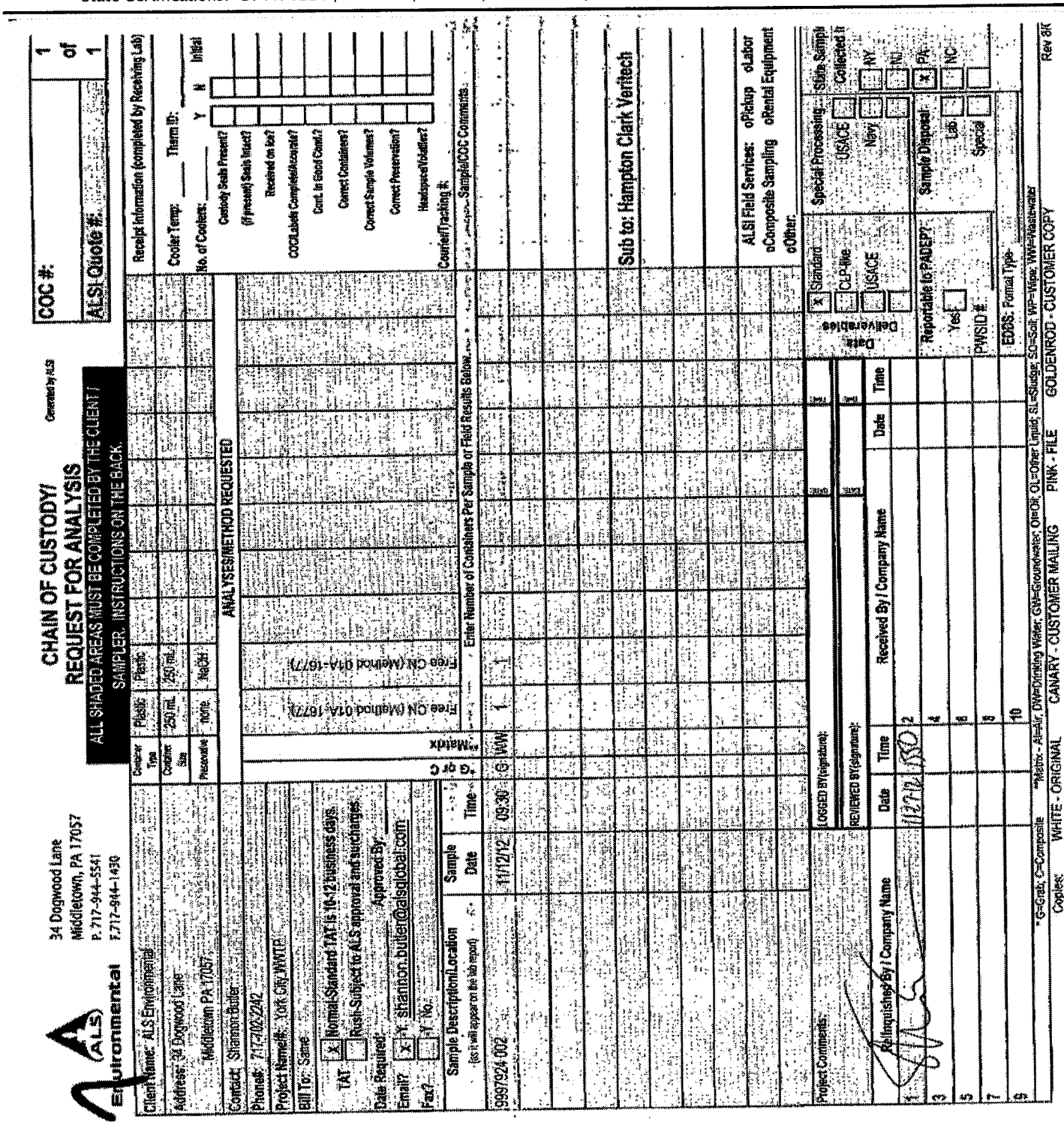
ALS Environmental Laboratory Locations Across North America

Canada: Burlington · Calgary · Centre of Excellence · Edmonton · Fort McMurray · Fort St. John · Grande Prairie · London · Mississauga · Richmond Hill · Saskatoon · Thunder Bay Vancouver Waterloo · Winnipeg · Yellowknife **United States:** Cincinnati · Everett · Fort Collins · Holland · Houston · Middletown · Salt Lake City · Spring City · York **Mexico:** Monterrey

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: CT PH-0224 , DE ID 11 , GA 914 , MA PA0102 , MD 128 , LA 04162 , VA 421 , WY EPA Region 8 , WV 343



FedEx Shipment Receipt

Address Information

Ship to:	**Ship from:**
Hampton - Clarke	Steve Smith
Hampton - Clarke	
175 US HIGHWAY 46 STE D	34 DOGWOOD LANE
FAIRFIELD, NJ	MIDDLETOWN, PA
070042327	17057
US	US
8004269992	7179445541

Shipment Information:
Tracking no.: 794160774035
Ship date: 11/27/2012
Estimated shipping charges: 14.82

Package Information
Service type: Priority Overnight
Package type: Your Packaging
Number of packages: 1
Total weight: 7 LBS
Declared Value: 0.00 USD
Special Services:
Pickup/Drop-off: Drop off package at FedEx location

Billing Information:
Bill transportation to: MyAccount-686
Your reference:
P.O. no.:
Invoice no.:
Department no.:

Thank you for shipping online with FedEx ShipManager at fedex.com.

Please Note
FedEx will not be responsible for any claim in excess of $100 per package, whether the result of loss, damage, delay, non-delivery, misdelivery, or misinformation, unless you declare a higher value, pay an additional charge, document your actual loss and file a timely claim. Limitations found in the current FedEx Service Guide apply. Your right to recover from FedEx for any loss, including intrinsic value of the package, loss of sales, income interest, profit, attorney's fees, costs, and other forms of damage whether direct, incidental, consequential, or special is limited to the greater of $100 or the authorized declared value. Recovery cannot exceed actual documented loss. Maximum for items of extraordinary value is $500, e.g., jewelry, precious metals, negotiable instruments and other items listed in our Service Guide. Written claims must be filed within strict time limits. Consult the applicable FedEx Service Guide for details.
The estimated shipping charge may be different than the actual charges for your shipment. Differences may occur based on actual weight, dimensions, and other factors. Consult the applicable FedEx Service Guide or the FedEx Rate Sheets for details on how shipping charges are calculated.

HC-V
HamptonClarke-Veritech

175 ROUTE 46 WEST, UNIT D · FAIRFIELD, NJ 07004
2 MADISON ROAD, FAIRFIELD, NJ 07004
800-426-9992 · 973-244-9770
FAX: 973-244-9787

WWW.HCVLAB.COM

Project: York City WWTP

Client PO: Not Available
Report To: Analytical Laboratory Services Inc.
34 Dogwood Lane
Middletown, PA 17057

Attn: Shannon Butler
Received Date: 11/28/2012
Report Date:
Deliverables: NJDEP-R
Lab ID: AC69443
Lab Project No: 2112801

This report is a true report of results obtained from our tests of this material. The report relates only to those samples received and analyzed by the laboratory. All results meet the requirements of the NELAC Institute standards. Laboratory reports may not be reproduced, except in full, without the written approval of the laboratory.

In lieu of a formal contract document, the total aggregate liability of Veritech to all parties shall not exceed Veritech's total fee for analytical services rendered.

Robin Cousineau - Quality Assurance Director OR Stanley Gliwicz - Laboratory Director

NJ (07071) NY (ELAP11408) CT (PH-0671)
PA (68-00463) KY (90124)

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: CT PH-0224 , DE ID 11 , GA 914 , MA PA0102 , MD 128 , LA 04162 , VA 421 , WY EPA Region 8 , WV 343

NJ (07071 and 07069) NY (ELAP11408 and 11939)
PA (68-00463 and 68-04409) KY (90124)
WV (353) MA (NJ386)
CT (PH-0671) USACE

Report Of Analysis
veritech laboratories

To: Analytical Laboratory Services Inc.

34 Dogwood Lane

Middletown PA 17057

Attention: Shannon Butler
Project: York City WWTP

Date Submitted: 11/28/2012
Date Reported: 12/14/2012

Lab#: AC69443-001 SampleID: 9997924 002

TestGroup	Analyte	DF	Units	MDL/PQL/RL	Result
AC69443-001	9997924 002		Date Collected	11/12/2012	
Cyanide (Available) OIA-1677					
	Cyanide	1	mg/L	0.0050	ND

RL = Reporting Limit ND = Not Detected

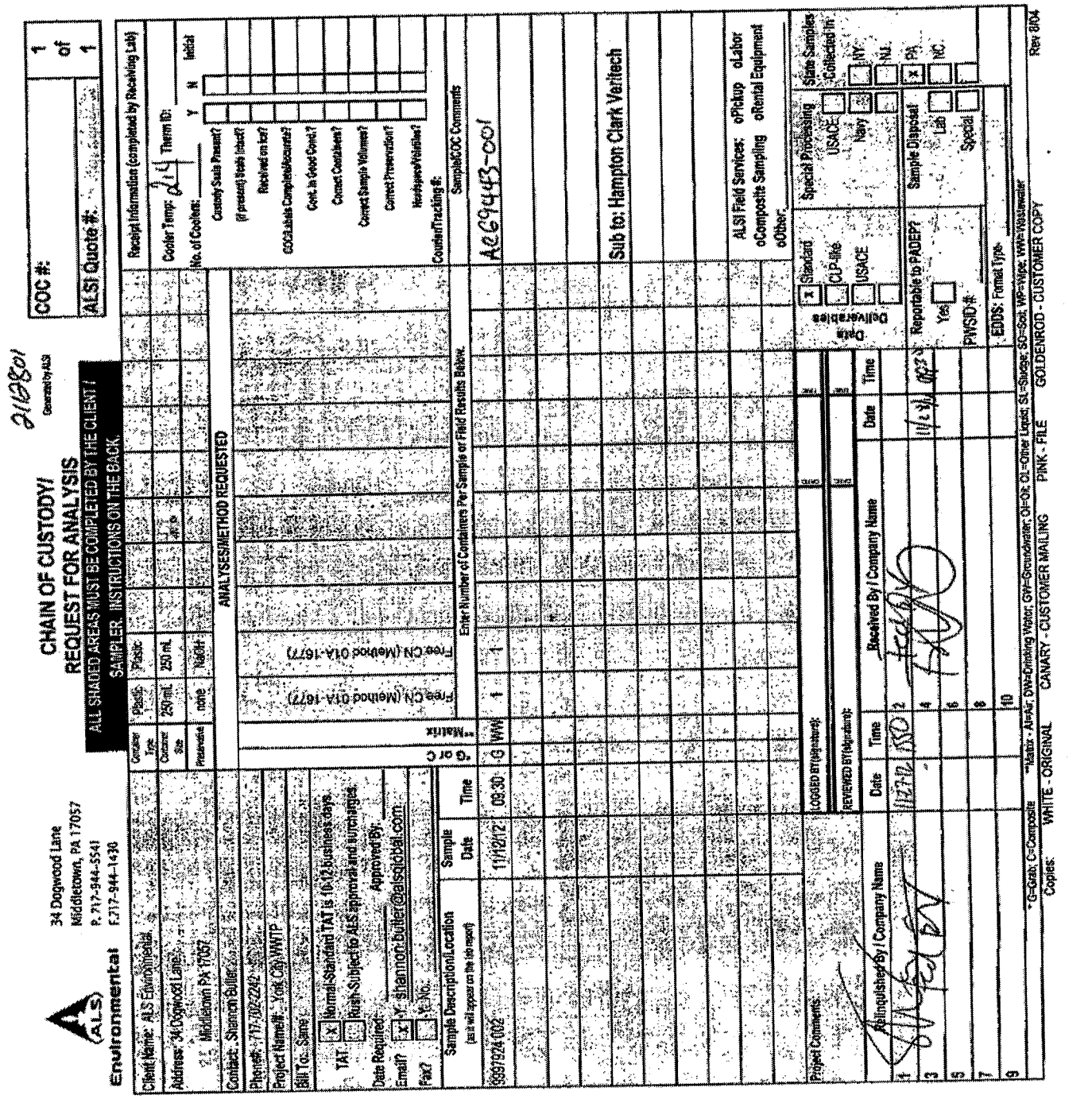
RL Definitions:
SW846 Inorganics reported to PQL
SW846 Organics reported to PQL
Clean Water Act Organics reported to PQL
Clean Water Act Inorganics reported to PQL
CLP Organics reported to CRQL
CLP Inorganics reported to CRQL

This report is a true report of results obtained from our tests of this material. In lieu of a formal contract document, the total aggregate liability of Veritech to all parties shall not exceed Veritech's total fee for analytical services rendered.

Robin Cousineau - Quality Assurance Director Or Stanley Gilewicz - Laboratory Director

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: CT PH-0224 , DE ID 11 , GA 914 , MA PA0102 , MD 128 , LA 04162 , VA 421 , WY EPA Region 8 , WV 343



ALS Environmental Laboratory Locations Across North America

Canada: Burlington · Calgary · Centre of Excellence · Edmonton · Fort McMurray · Fort St. John · Grande Prairie · London · Mississauga · Richmond Hill · Saskatoon · Thunder Bay Vancouver Waterloo · Winnipeg · Yellowknife **United States:** Cincinnati · Everett · Fort Collins · Holland · Houston · Middletown · Salt Lake City · Spring City · York **Mexico:** Monterrey

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: CT PH-0224 , DE ID 11 , GA 914 , MA PA0102 , MD 128 , LA 04162 , VA 421 , WY EPA Region 8 , WV 343

December 28, 2012

12/11-12/12

Mr. Joe Concino
York, City of (WWTP)
1701 Blackridge Road
York, PA 17405

Certificate of Analysis

Project Name:	**PP SCANS AND LOCAL LIMITS -**	Workorder:	**1003182**
Purchase Order:		Workorder ID:	**WW Local Limits 12/12/12**

Dear Mr. Concino,

Enclosed are the analytical results for samples received by the laboratory on Thursday, December 13, 2012.

The ALS Environmental laboratory in Middletown, Pennsylvania (formerly Analytical Laboratory Services, Inc.) 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 Shannon Butler (Project Coordinator) or Anna G Milliken (Technical Manager) at (717) 944-5541.

Please visit us at www.analyticallab.com for a listing of ALS' NELAP accreditations and Scope of Work, as well as other links to Water Quality documentation on the internet.

This laboratory report may not be reproduced, except in full, without the written approval of ALS Environmental.

This page is included as part of the Analytical Report and must be retained as a permanent record thereof.

Anna G Milliken
Technical Manager

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: CT PH-0224 , DE ID 11 , GA 914 , MA PA0102 , MD 128 , LA 04162 , VA 421 , WY EPA Region 8 , WV 343

SAMPLE SUMMARY

Workorder: 1003182 WW Local Limits 12/12/12 Discard Date: 01/11/2013

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
1003182001	Raw Influent	Waste Water	12/12/12 00:00	12/13/12 09:39	Customer
1003182002	002 Effluent	Waste Water	12/12/12 00:00	12/13/12 09:39	Customer
1003182003	Raw Influent	Waste Water	12/12/12 13:52	12/13/12 09:39	Customer
1003182004	002 Effluent	Waste Water	12/12/12 13:20	12/13/12 09:39	Customer
1003182005	Centrifuge Cake	Solid	12/11/12 15:30	12/13/12 09:39	Customer

Workorder Comments:

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 performed in the laboratory and are therefore analyzed out of hold time.

Standard Acronyms/Flags

J, B	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

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: CT PH-0224 , DE ID 11 , GA 914 , MA PA0102 , MD 128 , LA 04162 , VA 421 , WY EPA Region 8 , WV 343

ANALYTICAL RESULTS

Workorder: 1003182 WW Local Limits 12/12/12

Lab ID: **1003182001** Date Collected: 12/12/2012 00:00 Matrix: Waste Water

Sample ID: **Raw Influent** Date Received: 12/13/2012 09:39

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
WET CHEMISTRY										
Cyanide, Total	ND		mg/L	0.0050	EPA 335.4	12/20/12	SYB	12/21/12 10:38	KLR	A
METALS										
Arsenic, Total	ND		mg/L	0.0050	EPA 200.7	12/18/12	KMK	12/26/12 09:48	JWK	B1
Cadmium, Total	ND		mg/L	0.0010	EPA 200.7	12/18/12	KMK	12/26/12 09:48	JWK	B1
Chromium, Total	0.0039		mg/L	0.0010	EPA 200.8	12/18/12	KMK	12/20/12 23:03	MWO	B2
Copper, Total	0.051		mg/L	0.0050	EPA 200.7	12/18/12	KMK	12/26/12 09:48	JWK	B1
Lead, Total	0.0083		mg/L	0.0030	EPA 200.7	12/18/12	KMK	12/26/12 09:48	JWK	B1
Mercury, Total (Low-level)	0.00021		mg/L	0.00020	EPA 245.1	12/20/12	MNP	12/20/12 07:46	MNP	B3
Molybdenum, Total	0.033		mg/L	0.010	EPA 200.7	12/18/12	KMK	12/26/12 09:48	JWK	B1
Nickel, Total	0.0067		mg/L	0.0025	EPA 200.8	12/18/12	KMK	12/20/12 23:03	MWO	B2
Selenium, Total	0.0022		mg/L	0.0020	EPA 200.8	12/18/12	KMK	12/20/12 23:03	MWO	B2
Silver, Total	ND		mg/L	0.0010	EPA 200.8	12/18/12	KMK	12/20/12 23:03	MWO	B2
Zinc, Total	0.13		mg/L	0.010	EPA 200.7	12/18/12	KMK	12/26/12 09:48	JWK	B1

Sample Comments:

Anna G Milliken
Technical Manager

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: CT PH-0224 , DE ID 11 , GA 914 , MA PA0102 , MD 128 , LA 04162 , VA 421 , WY EPA Region 8 , WV 343

ANALYTICAL RESULTS

Workorder: 1003182 WW Local Limits 12/12/12

Lab ID: **1003182002** Date Collected: 12/12/2012 00:00 Matrix: Waste Water

Sample ID: **002 Effluent** Date Received: 12/13/2012 09:39

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
WET CHEMISTRY										
Cyanide, Total	ND		mg/L	0.0050	EPA 335.4	12/20/12	SYB	12/21/12 10:38	KLR	A
METALS										
Arsenic, Total	ND		mg/L	0.0050	EPA 200.7	12/18/12	KMK	12/26/12 09:52	JWK	B1
Cadmium, Total	ND		mg/L	0.0010	EPA 200.7	12/18/12	KMK	12/26/12 09:52	JWK	B1
Chromium, Total	0.0016		mg/L	0.0010	EPA 200.8	12/18/12	KMK	12/20/12 23:07	MWO	B2
Copper, Total	ND		mg/L	0.0050	EPA 200.7	12/18/12	KMK	12/26/12 09:52	JWK	B1
Lead, Total	0.0051		mg/L	0.0030	EPA 200.7	12/18/12	KMK	12/26/12 09:52	JWK	B1
Mercury, Total (Low-level)	ND		mg/L	0.00020	EPA 245.1	12/20/12	MNP	12/20/12 07:49	MNP	B3
Molybdenum, Total	0.081		mg/L	0.010	EPA 200.7	12/18/12	KMK	12/26/12 09:52	JWK	B1
Nickel, Total	0.0059		mg/L	0.0025	EPA 200.8	12/18/12	KMK	12/20/12 23:07	MWO	B2
Selenium, Total	ND		mg/L	0.0020	EPA 200.8	12/18/12	KMK	12/20/12 23:07	MWO	B2
Silver, Total	ND		mg/L	0.0010	EPA 200.8	12/18/12	KMK	12/20/12 23:07	MWO	B2
Zinc, Total	0.048		mg/L	0.010	EPA 200.7	12/18/12	KMK	12/26/12 09:52	JWK	B1

Sample Comments:

Anna G Milliken
Technical Manager

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: CT PH-0224 , DE ID 11 , GA 914 , MA PA0102 , MD 128 , LA 04162 , VA 421 , WY EPA Region 8 , WV 343

ANALYTICAL RESULTS

Workorder: 1003182 WW Local Limits 12/12/12

Lab ID: **1003182003** Date Collected: 12/12/2012 13:52 Matrix: Waste Water

Sample ID: **Raw Influent** Date Received: 12/13/2012 09:39

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
WET CHEMISTRY										
Oil/Grease Hexane Extractable	127		mg/L	2.3	EPA 1664B			12/27/12 01:09	JJS	A

Sample Comments:

Anna G Milliken
Technical Manager

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: CT PH-0224 , DE ID 11 , GA 914 , MA PA0102 , MD 128 , LA 04162 , VA 421 , WY EPA Region 8 , WV 343

ANALYTICAL RESULTS

Workorder: 1003182 WW Local Limits 12/12/12

Lab ID: **1003182004** Date Collected: 12/12/2012 13:20 Matrix: Waste Water

Sample ID: **002 Effluent** Date Received: 12/13/2012 09:39

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
WET CHEMISTRY										
Oil/Grease Hexane Extractable	ND		mg/L	2.3	EPA 1664B			12/27/12 01:09	JJS	A

Sample Comments:

Anna G Milliken
Technical Manager

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: CT PH-0224 , DE ID 11 , GA 914 , MA PA0102 , MD 128 , LA 04162 , VA 421 , WY EPA Region 8 , WV 343

ANALYTICAL RESULTS

Workorder: 1003182 WW Local Limits 12/12/12

Lab ID: **1003182005** Date Collected: 12/11/2012 15:30 Matrix: Solid

Sample ID: **Centrifuge Cake** Date Received: 12/13/2012 09:39

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
SEMIVOLATILES										
Acenaphthene	ND		ug/kg	2990	SW846 8270D	12/13/12	RMP	12/18/12 18:40	AJL	B
Acenaphthylene	ND		ug/kg	2990	SW846 8270D	12/13/12	RMP	12/18/12 18:40	AJL	B
Anthracene	ND		ug/kg	2990	SW846 8270D	12/13/12	RMP	12/18/12 18:40	AJL	B
Benzidine	ND		ug/kg	32300	SW846 8270D	12/13/12	RMP	12/18/12 18:40	AJL	B
Benzo(a)anthracene	ND		ug/kg	2990	SW846 8270D	12/13/12	RMP	12/18/12 18:40	AJL	B
Benzo(a)pyrene	ND		ug/kg	2990	SW846 8270D	12/13/12	RMP	12/18/12 18:40	AJL	B
Benzo(b)fluoranthene	ND		ug/kg	2990	SW846 8270D	12/13/12	RMP	12/18/12 18:40	AJL	B
Benzo(g,h,i)perylene	ND		ug/kg	2990	SW846 8270D	12/13/12	RMP	12/18/12 18:40	AJL	B
Benzo(k)fluoranthene	ND		ug/kg	2990	SW846 8270D	12/13/12	RMP	12/18/12 18:40	AJL	B
4-Bromophenyl-phenylether	ND		ug/kg	5980	SW846 8270D	12/13/12	RMP	12/18/12 18:40	AJL	B
Butylbenzylphthalate	ND		ug/kg	5980	SW846 8270D	12/13/12	RMP	12/18/12 18:40	AJL	B
4-Chloro-3-methylphenol	ND		ug/kg	16100	SW846 8270D	12/13/12	RMP	12/18/12 18:40	AJL	B
bis(2-Chloroethoxy)methane	ND		ug/kg	5980	SW846 8270D	12/13/12	RMP	12/18/12 18:40	AJL	B
bis(2-Chloroethyl)ether	ND		ug/kg	5980	SW846 8270D	12/13/12	RMP	12/18/12 18:40	AJL	B
bis(2-Chloroisopropyl)ether	ND		ug/kg	5980	SW846 8270D	12/13/12	RMP	12/18/12 18:40	AJL	B
2-Chloronaphthalene	ND		ug/kg	5980	SW846 8270D	12/13/12	RMP	12/18/12 18:40	AJL	B
2-Chlorophenol	ND		ug/kg	16100	SW846 8270D	12/13/12	RMP	12/18/12 18:40	AJL	B
4-Chlorophenyl-phenylether	ND		ug/kg	5980	SW846 8270D	12/13/12	RMP	12/18/12 18:40	AJL	B
Chrysene	ND		ug/kg	2990	SW846 8270D	12/13/12	RMP	12/18/12 18:40	AJL	B
Di-n-Butylphthalate	ND		ug/kg	5980	SW846 8270D	12/13/12	RMP	12/18/12 18:40	AJL	B
Di-n-Octylphthalate	ND		ug/kg	16100	SW846 8270D	12/13/12	RMP	12/18/12 18:40	AJL	B
Dibenzo(a,h)anthracene	ND		ug/kg	2990	SW846 8270D	12/13/12	RMP	12/18/12 18:40	AJL	B
1,2-Dichlorobenzene	ND		ug/kg	5980	SW846 8270D	12/13/12	RMP	12/18/12 18:40	AJL	B
1,3-Dichlorobenzene	ND		ug/kg	5980	SW846 8270D	12/13/12	RMP	12/18/12 18:40	AJL	B
1,4-Dichlorobenzene	ND		ug/kg	5980	SW846 8270D	12/13/12	RMP	12/18/12 18:40	AJL	B
3,3-Dichlorobenzidine	ND		ug/kg	8970	SW846 8270D	12/13/12	RMP	12/18/12 18:40	AJL	B
2,4-Dichlorophenol	ND		ug/kg	5980	SW846 8270D	12/13/12	RMP	12/18/12 18:40	AJL	B
Diethylphthalate	ND		ug/kg	5980	SW846 8270D	12/13/12	RMP	12/18/12 18:40	AJL	B
2,4-Dimethylphenol	ND		ug/kg	16100	SW846 8270D	12/13/12	RMP	12/18/12 18:40	AJL	B
Dimethylphthalate	ND		ug/kg	5980	SW846 8270D	12/13/12	RMP	12/18/12 18:40	AJL	B
2,4-Dinitrophenol	ND		ug/kg	5980	SW846 8270D	12/13/12	RMP	12/18/12 18:40	AJL	B
2,4-Dinitrotoluene	ND		ug/kg	5980	SW846 8270D	12/13/12	RMP	12/18/12 18:40	AJL	B
2,6-Dinitrotoluene	ND		ug/kg	5980	SW846 8270D	12/13/12	RMP	12/18/12 18:40	AJL	B
1,2-Diphenylhydrazine	ND		ug/kg	5980	SW846 8270D	12/13/12	RMP	12/18/12 18:40	AJL	B
bis(2-Ethylhexyl)phthalate	15300		ug/kg	5980	SW846 8270D	12/13/12	RMP	12/18/12 18:40	AJL	B
Fluoranthene	ND		ug/kg	2990	SW846 8270D	12/13/12	RMP	12/18/12 18:40	AJL	B
Fluorene	ND		ug/kg	2990	SW846 8270D	12/13/12	RMP	12/18/12 18:40	AJL	B
Hexachlorobenzene	ND		ug/kg	5980	SW846 8270D	12/13/12	RMP	12/18/12 18:40	AJL	B
Hexachlorobutadiene	ND		ug/kg	5980	SW846 8270D	12/13/12	RMP	12/18/12 18:40	AJL	B
Hexachlorocyclopentadiene	ND		ug/kg	16100	SW846 8270D	12/13/12	RMP	12/18/12 18:40	AJL	B

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: CT PH-0224 , DE ID 11 , GA 914 , MA PA0102 , MD 128 , LA 04162 , VA 421 , WY EPA Region 8 , WV 343

ANALYTICAL RESULTS

Workorder: 1003182 WV Local Limits 12/12/12

Lab ID: **1003182005** Date Collected: 12/11/2012 15:30 Matrix: Solid

Sample ID: **Centrifuge Cake** Date Received: 12/13/2012 09:39

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
Hexachloroethane	ND		ug/kg	5980	SW846 8270D	12/13/12	RMP	12/18/12 18:40	AJL	B
Indeno(1,2,3-cd)pyrene	ND		ug/kg	2990	SW846 8270D	12/13/12	RMP	12/18/12 18:40	AJL	B
Isophorone	ND		ug/kg	5980	SW846 8270D	12/13/12	RMP	12/18/12 18:40	AJL	B
2-Methyl-4,6-dinitrophenol	ND		ug/kg	16100	SW846 8270D	12/13/12	RMP	12/18/12 18:40	AJL	B
Naphthalene	ND		ug/kg	2990	SW846 8270D	12/13/12	RMP	12/18/12 18:40	AJL	B
Nitrobenzene	ND		ug/kg	5980	SW846 8270D	12/13/12	RMP	12/18/12 18:40	AJL	B
2-Nitrophenol	ND		ug/kg	16100	SW846 8270D	12/13/12	RMP	12/18/12 18:40	AJL	B
4-Nitrophenol	ND		ug/kg	16100	SW846 8270D	12/13/12	RMP	12/18/12 18:40	AJL	B
N-Nitrosodimethylamine	ND		ug/kg	5980	SW846 8270D	12/13/12	RMP	12/18/12 18:40	AJL	B
N-Nitroso-di-n-propylamine	ND		ug/kg	5980	SW846 8270D	12/13/12	RMP	12/18/12 18:40	AJL	B
N-Nitrosodiphenylamine	ND		ug/kg	5980	SW846 8270D	12/13/12	RMP	12/18/12 18:40	AJL	B
Pentachlorophenol	ND		ug/kg	5980	SW846 8270D	12/13/12	RMP	12/18/12 18:40	AJL	B
Phenanthrene	ND		ug/kg	2990	SW846 8270D	12/13/12	RMP	12/18/12 18:40	AJL	B
Phenol	ND		ug/kg	16100	SW846 8270D	12/13/12	RMP	12/18/12 18:40	AJL	B
Pyrene	ND		ug/kg	2990	SW846 8270D	12/13/12	RMP	12/18/12 18:40	AJL	B
1,2,4-Trichlorobenzene	ND		ug/kg	5980	SW846 8270D	12/13/12	RMP	12/18/12 18:40	AJL	B
2,4,6-Trichlorophenol	ND		ug/kg	5980	SW846 8270D	12/13/12	RMP	12/18/12 18:40	AJL	B
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2,4,6-Tribromophenol (S)	87.3		%	37-123	SW846 8270D	12/13/12	RMP	12/18/12 18:40	AJL	B
2-Fluorobiphenyl (S)	87.9		%	45-105	SW846 8270D	12/13/12	RMP	12/18/12 18:40	AJL	B
2-Fluorophenol (S)	77.6		%	35-104	SW846 8270D	12/13/12	RMP	12/18/12 18:40	AJL	B
Nitrobenzene-d5 (S)	72.7		%	41-110	SW846 8270D	12/13/12	RMP	12/18/12 18:40	AJL	B
Phenol-d5 (S)	82.6		%	40-100	SW846 8270D	12/13/12	RMP	12/18/12 18:40	AJL	B
Terphenyl-d14 (S)	90.4		%	38-113	SW846 8270D	12/13/12	RMP	12/18/12 18:40	AJL	B
WET CHEMISTRY										
Cyanide, Total	ND		mg/kg	1.5	SW846 9012B	12/18/12	SYB	12/18/12 17:10	KLR	A1
Hexane Extractable Material	37800		mg/kg	1210	SW846 9071B			12/21/12 20:20	KJD	A
Moisture	83.4		%	0.1	SM20-2540 G			12/14/12 17:00	CF	A
Silica Gel Treated HEM	7190		mg/kg	1210	SW846 9071B			12/21/12 20:20	KJD	A
Total Solids	16.6		%	0.1	SM20-2540 G			12/14/12 17:00	CF	A
METALS										
Arsenic, Total	ND		mg/kg	11.6	SW846 6010C	12/17/12	KMK	12/17/12 10:46	JWK	B1
Cadmium, Total	ND		mg/kg	2.9	SW846 6010C	12/17/12	KMK	12/17/12 10:46	JWK	B1
Chromium, Total	25.4		mg/kg	5.8	SW846 6010C	12/17/12	KMK	12/17/12 10:46	JWK	B1
Copper, Total	443		mg/kg	11.6	SW846 6010C	12/17/12	KMK	12/17/12 10:46	JWK	B1
Lead, Total	75.2		mg/kg	11.6	SW846 6010C	12/17/12	KMK	12/17/12 10:46	JWK	B1
Mercury, Total	2.3		mg/kg	0.29	SW846 7471B	12/20/12	MNP	12/20/12 13:47	MNP	A2
Molybdenum, Total	20.2		mg/kg	11.6	SW846 6010C	12/17/12	KMK	12/17/12 10:46	JWK	B1

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: CT PH-0224 , DE ID 11 , GA 914 , MA PA0102 , MD 128 , LA 04162 , VA 421 , WY EPA Region 8 , WV 343

ANALYTICAL RESULTS

Workorder: 1003182 WW Local Limits 12/12/12

Lab ID: **1003182005** Date Collected: 12/11/2012 15:30 Matrix: Solid

Sample ID: **Centrifuge Cake** Date Received: 12/13/2012 09:39

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
Nickel, Total	25.8		mg/kg	11.6	SW846 6010C	12/17/12	KMK	12/17/12 10:46	JWK	B1
Selenium, Total	ND		mg/kg	29.0	SW846 6010C	12/17/12	KMK	12/17/12 10:46	JWK	B1
Silver, Total	9.3		mg/kg	2.9	SW846 6010C	12/17/12	KMK	12/17/12 10:46	JWK	B1
Zinc, Total	675		mg/kg	11.6	SW846 6010C	12/17/12	KMK	12/17/12 10:46	JWK	B1

Sample Comments:

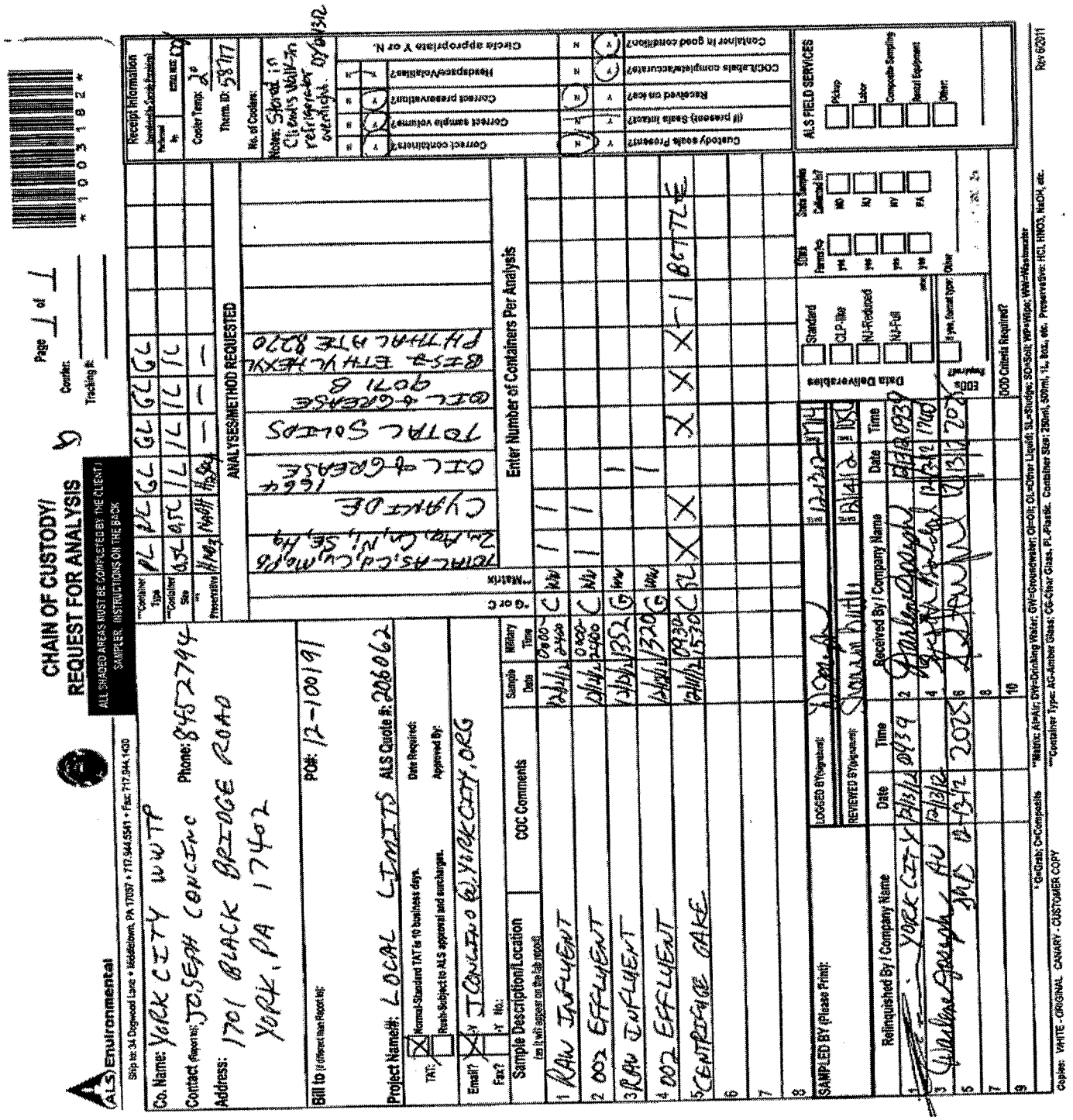
This sample was analyzed at a dilution in the Method 8270 analysis due to sample matrix. Reporting limits were adjusted accordingly.

Anna G Milliken
Technical Manager

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: CT PH-0224 , DE ID 11 , GA 914 , MA PA0102 , MD 128 , LA 04162 , VA 421 , WY EPA Region 8 , WV 343



ALS Environmental Laboratory Locations Across North America

Canada: Burlington · Calgary · Centre of Excellence · Edmonton · Fort McMurray · Fort St. John · Grande Prairie · London · Mississauga · Richmond Hill · Saskatoon · Thunder Bay Vancouver Waterloo · Winnipeg · Yellowknife **United States:** Cincinnati · Everett · Fort Collins · Holland · Houston · Middletown · Salt Lake City · Spring City · York **Mexico:** Monterrey

Appendix K
PADEP Correspondence

The City of York
Pennsylvania

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

James E Gross
Director
Department of Public Works

August 10, 2012

Mr. Victor Landis
Pennsylvania Department of Environmental Protection
Southcentral Region
909 Elmerton Avenue
Harrisburg, PA 17110

Re: York City Wastewater Treatment Plant

Dear Mr. Landis:

Background:

The City of York Wastewater Treatment Plant is located in Manchester Township and serves the following municipalities (in part or in whole):

1. City of York
2. Manchester Township
3. West Manchester Township
4. York Township
5. Spring Garden Township
6. North York Borough
7. West York Borough

In addition, an agreement is in place between the City of York and Springettsbury Township that allows this municipality to pump flow over to the York facility.

The WWTP is designed to treat 26-mgd with a peak-flow design of 57-mgd, all of which is discharged through the permitted 002 outfall. The remaining flow is discharged through the permitted 001 outfall. Flow discharged through the 001 outfall is disinfected using sodium hypochlorite.

Average daily flows through the wastewater treatment plant have been approximately 11-mgd.

Telephone: 717-849-2245 *Facsimile: 717-845-7457* *Email: jgross@yorkcity.org*

Issue:

On August 7, 2012 at approximately 0006 AM it was discovered that power had been lost to the UV disinfection system. All flows were diverted to Train 2 and the 001 outfall and emergency disinfection were placed into service.

Timeline and Action Taken:

1. August 6, 2012 at approximately 0700 it was discovered that power was out to Train 2 effluent screw pumps. All flow was diverted to Train 3. I. B. Abel, an electrical contractor, was called in to assist with troubleshooting the loss of power to the screw pumps. A ground fault was found to be the cause of the loss of power and this was repaired and power was restored. At approximately 1100 on August 6 the screw pumps were running and the plant was restored to normal operations.

2. August 7, 2012 at approximately 0006 a plant operator discovered that power was out at the UV disinfection building. This was reported to a Supervisor and ~~the~~ I. B. Abel was recalled for assistance. All flows were diverted to Train 2 and to the 001 outfall and emergency disinfection was placed into service. Flow rate at 0000 on August 7 was at 12.6 MGD and decreasing.

   At approximately 0750 on August 7 power was restored to the UV disinfection building and the plant was returned to normal operation. An unlabeled electrical breaker was found to be off causing the loss of power to the UV building. Flow rate at 0800 on August 7 was at 8.3 MGD.

Estimated Effluent Discharge Volume:

The estimated volume of un-disinfected plant effluent discharged from outfall 002 during this event is 9.0 million gallons. The estimated volume of plant effluent disinfected with sodium hypochlorite discharged from outfall 001 during this event is 2.0 million gallons.

Discovery:

1. During the troubleshooting of the loss of power for the screw pumps on August 6 an unlabeled electrical breaker was turned off. A ground fault was found, a temporary power source placed into service and the screw pumps were returned to service. Repair parts to fix the ground fault condition are on order. The unlabeled breaker was inadvertently left off. The WWTP computer control system showed all plant operations as normal and the UV disinfection system as in service. On August 7 it was discovered that UV system did not have power and the unlabeled breaker was found to be the cause of the loss of power.

Corrective Action:

1. The unlabeled breaker has been properly marked.
2. An alarm has been added to the WWTP computer control system to provide notification in the event of the loss of power to the UV disinfection system.

Telephone: 717-849-2245 *Facsimile: 717-845-7457* *Email: jgross@yorkcity.org*

The laboratory test results for samples taken on August 6 and August 7, 2012 are as follows:

Parameter	Outfall 002		Outfall 001
	August 6, 2012	August 7, 2012	August 7, 2012
CBOD, mg/l	Comment Below	Comment Below	Comment Below
TSS, mg/l	2	2	22
NH3, mg/l	Comment Below	Comment Below	Comment Below
PO4, mg/l	0.3	0.4	1.0
Chlorine Residual, mg/l	Not Applicable	Not Applicable	0.01 Ave
Fecal Coliform, MPN	41	2,200	2,400
TKN, mg/l	Not Available	1.2	3.0
Nitrite-Nitrate, mg/l	5.8	5.5	7.4
Dissolved Oxygen, mg/l	8.3	8.3	2.6
Temperature, °C	24	24	17

Copies of the actual lab reports are attached to the report. The CBOD and Ammonia test results will not be finalized until Monday, August 13, 2012 and will be forwarded to DEP as an Addendum to this report.

This report is being submitted by James E. Gross, Director of Public Works and Lawrence A. Lutter, P.E., the consulting engineer with Buchart Horn for the York City Wastewater Treatment Plant, in the absence of an Operator of record. Mr. Steve Douglas had been the Operator of record for the plant and Mr. Douglas was placed on Administrative Leave effective 1630 on Friday, August 3, 2012. The City of York is finalizing plans to name a new Operator of record and will provide proper notification to DEP.

Sincerely;

James E. Gross, Director
Department of Public Works

Lawrence A. Lutter, P.E.
Buchart Horn, Inc.

Attachment

cc: C. Kim Bracey, Mayor
J. T. Hand – York City Sewer Authority Chairman

Telephone: 717-849-2245 *Facsimile: 717-845-7457* *Email: jgross@yorkcity.org*

(Intentionally blank)

pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION
CLEAN WATER PROGRAM

August 13, 2012

NOTICE OF VIOLATION

CERTIFIED MAIL NO. 7007 3020 0002 8376 4924

James E. Gross, Director
Department of Public Works
101 South George Street
PO Box 509
York, PA 17405

Re: Sewage
York City WWTP
NPDES Permit No. PA0026263
Manchester Township, York County

Dear Mr. Gross:

This is to confirm the results of the Department's inspection conducted on August 9, 2012, which revealed the following violations:

1. The unauthorized discharge of partially treated sewage from the York City WWTP that occurred on August 7, 2012. The discharge was the result of the loss of electrical power to the ultra-violet disinfection system.

2. Several operational issues at the York City WWTP that occurred on August 6, 2012, including a malfunction of the recirculation pumps in Train 3, loss of electrical power to Train 2 effluent screw pumps and sand filter system, and the improper operation of the centrifuge system.

Such conditions are in violation of your permit No. PA0026263. Consequently, you are in violation of the Pennsylvania Clean Streams Law, the Act of June 22, 1937, P.L. 1987, as amended, and subject to the penalties provided therein.

At this time the Department is requesting that you contact me within 5 days of the date of this letter to schedule a meeting to discuss these violations and recent personnel changes at the facility.

This Notice of Violation is neither an order nor any other final action of the Department of Environmental Protection (Department). It neither imposes nor waives any enforcement action available to the Department under any of its statutes. If the Department determines that an enforcement action is appropriate, you will be notified of the action.

To schedule the requested meeting, please contact me 717.705.4789.

Sincerely,

Victor Landis
Water Quality Specialist Supervisor
Clean Water Program

cc: York City WWTP

The City of York
Pennsylvania

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

November 12, 2012

Mr. Austin Pardoe
Pennsylvania Department of Environmental Protection
Bureau of Water Standards and Facility Regulation
150 Roosevelt Ave Ste. 200
York, PA 17404

Re: York City Wastewater Treatment Plant – Hurricane Sandy

Dear Mr. Pardoe:

Please find below a final report on the status of the York City Wastewater Treatment Plant during Hurricane Sandy.

Background:

The City of York Wastewater Treatment Plant is located in Manchester Township and serves the following municipalities (in part or whole):

1. City of York
2. Manchester Township
3. West Manchester Township
4. York Township
5. Spring Garden Township
6. North York Borough
7. West York Borough

In addition, an agreement is in place between the City of York and Springettsbury Township that allows this municipality to pump flow over to the York facility.

The WWTP is designed to treat 26-mgd with a peak flow design of 57-mgd. Most of this flow is discharged from the 002 outfall. The remaining flow is discharged through the permitted 001 outfall. Flow discharged through the 001 outfall is disinfected using sodium hypochlorite after treatment.

Average daily flows through the WWTP have been approximately 11-mgd.

Phone # (717)845-2794 *Fax # (717)845-7342* *Email:Carnold@yorkcity.org*

Preparations for Hurricane:

The day prior to the Hurricane we had plant staff move non-essential equipment like portable pumps and hoses to higher ground so they would not be damaged and wouldn't float into tanks if the water rose to that level.

We also checked various other pieces of equipment to verify that they were in proper working order by looking at lubricant levels and test running the equipment. All equipment checked out ok. We filled all our portable pumps with fuel and placed them all in a central location for easy access. Out of service tanks were pumped empty in case they were needed to be put in service to accept additional flow. Prior to the storm we had one empty secondary clarifier at Train 3 and two empty aeration passes, also at Train 3.

Event:

Hurricane Sandy hit Central Pennsylvania from October 29, 2012 through October 30, 2012 and an estimated ten (10) inches of rain fell over the service area. There was also a period of high wind and wind gusts with the storm.

The City of York issued a Declaration of Disaster Emergency on October 29, 2012. The City also sent out a Press Release for a Water Use Advisory asking everyone in the service area to curtail water use. (Copies attached)

At approximately 12:00 hours on October 29, 2012 the influent flow to the York Wastewater Treatment Plant reached 27 mgd, at this time an additional secondary clarifier was put into service at treatment Train #3, this would account for all three secondary clarifiers in service at Train #3. At 14:00 hours on October 29 an additional treatment train was put into service at Train #3. At 14:10 hours on October 29, 1012 the influent flow to the York Wastewater Treatment Plant reached 37 mgd, at that time I took a phone call from the plant operator of the Springettsbury Treatment Plant; he informed me that they were approximately 15 minutes away from turning their pumps on to send us an additional 5 mgd of flow. The influent flow continued to rise over the next few hours, as the flow rose (3) previously out of service primary tanks were put into service to try and offset the additional influx of flow. At 20:50 hours on October 29 the influent flow reached 69.3- mgd all previously out of service tanks had been put into service by this time, steps were then taken to allow flow to pass through the permitted 001 discharge. The High Flow Standard Operating Procedure for the treatment plant was followed. Notification was made to Austin Pardoe at DEP at 19:04 hours on October 29 informing him that efforts were underway to start using the 001 discharge. During this time we added Sodium Hypochlorite to the 001 discharge line; every hour while we were discharging out the 001 outfall a sample was taken from the storm water basin and checked by our lab chemist to determine the amount of chlorine residual present in the sample. We made stroke and speed adjustments to the sodium hypo pump to keep a residual in the basin above 1 mg/L.

The approximate amount of partially treated sewage that was discharged out the 001 was 12,487,500 gallons. The permitted 001 outfall discharges into the Codorus Creek.

Use of the permitted 001 discharge continued until 13:10 hours on October 31, 2012. Plant flows at that time were 30.5- mgd.

Phone # (717)845-2794 *Fax # (717)845-7342* *Email:Carnold@yorkcity.org*

During this time, a pump and grinder were damaged when they were submerged due to the high influent flow. The motors for the pump and grinder were removed and taken to a vendor to be checked, baked, re-wound and then returned to be re-installed. The gearboxes on the pump and grinder were drained of their oil and flushed with mineral oil, new oil was then put in the gearboxes and the motors were re-installed. The site lighting next to the walkway at the 002 discharge point was also damaged. Two site lights were damaged when they were bent over due to the high water level and floating debris in the Codorus Creek. This was the only damage the WWTP received during the storm.

During the Hurricane and the increased flow the plant never lost power. All equipment and systems continued to run normally without any interruption.

Short and Long term goals for dealing with High Flows:

Short Term:

The WWTP plant observed overflow of the Train #2 secondary aeration basin effluent channel, between the basins and the secondary clarifiers. This overflow consisted of partially treated secondary effluent/mixed liquor. This condition was observed in previous high flow events and corrective action was taken by the installation of an additional course of block along the channel. This observation will be subject to further evaluation by the WWTP staff and engineering firm.

Plant staff observed overflow of partially treated primary effluent at the point where the effluent flow splits to enter treatment Train #2 and treatment Train #3 pumping station. This area will also be evaluated by the engineer to determine ways to contain the higher flows.

Long term:

To work with the other municipalities including the City of York in urging them to develop an I&I (Inflow and Infiltration) program to identify the sources and locations of excessive inflow and establish funding for projects to decrease the amount of flow the plant receives during rain events. This may also be considered a short term goal because a meeting is scheduled for later this month with the other municipalities to discuss this very issue. If the connected municipalities can reduce the amount of flow the plant receives from major rain events, the City may be able to reduce the use of the 001 permitted discharge but eliminating its use can only be determined by the effectiveness of the I&I reduction programs.

Respectfully submitted;

Chad Arnold, Acting General Manager
Operator of Record