EXHIBIT D

ENGINEERING ASSESSMENT - ASSET INVENTORY

DELCORA SEWERAGE FACILITIES
ENGINEERING ASSESSMENT AND ORIGINAL COST

Various Locations
Delaware and Chester Counties, PA

Prepared for:

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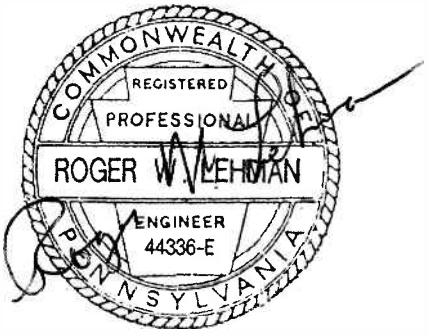

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DLCRA19001

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- ACT 12 (HB1326)

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- City of Chester
- Marcus Hook PS Deed

DIGITAL FILES

UNIFORM SYSTEM OF ACCOUNTS

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1. EXECUTIVE SUMMARY

As required by PA Act 12 (HB1326) and following the guidelines of the "Uniform System of Accounts for Class A Wastewater Utilities", an assessment of the tangible assets of facilities and equipment of The Delaware County Regional Water Quality Control Authority (DELCORA) wastewater utility is prepared as part of the asset purchase agreement with Aqua Pennsylvania Wastewater, Inc. (Aqua). Each facility and class of equipment was coded based on Section 300 of the "Wastewater Utility Plant Accounts" of the Guidelines. The Asset Survey included the Western Regional Wastewater Treatment Plant (WRTP), 3 remote Wastewater Treatment Plants (WWTPs), 24 pump stations and associated force mains, and approximately 160 miles of gravity sewers. Asset cost information was derived from various sources. Site visits to each of the facilities were conducted to inventory the equipment and assess conditions.

Site inventories and facility conditions were documented on facility information sheets and summarized in the facility description summaries.

The overall condition of the WRTP and 3 remote WWTPs is good.

Conditions of the Pump Stations varies from poor to very good based on the age and/or completion of recent improvements.

Gravity sewer and force main conditions were not determined. The piping installation period ranges from the early 1900s to 2018.

A complete list of the assets and available original costs is provided in Section 8 of this report.

2. PURPOSE OF REPORT

The purpose of this report is to "conduct an assessment of the tangible assets of the selling utility" per the requirements of PA Act 12 (HB1326).

This engineering assessment will be used by the Utility Value Experts (UVEs) retained by both the seller (DELCORA) and buyer (AQUA). The engineering assessment followed the practices and procedures of the Public Utility Commission (PUC) and National Association of Regulatory Utility Commissioners (NARUC) Systems of Accounts. The engineering assessment report documents the conditions and original costs of DELCORA's assets that will be used as the common list for the UVEs to develop their appraisal of the system.

The report preparation process included meeting with key DELCORA and Aqua representatives to identify and confirm specific information needed to support the assessment and to prepare the report, providing a mutually agreed upon scope of work with DELCORA and Aqua. The inventory is a compilation of data gathered by Pennoni and Weston Solutions, Inc., developed from institutional knowledge, available records, maps, work orders, payment records from construction projects, GIS, site evaluations, and other sources to provide an inventory and listing.

This report contains the following:

- An inventory of the used and useful assets to be transferred, compiled by year and account (codes).
- Identification of facilities being held for future use (if any).
- A list of non-depreciable property such as land and rights-of-way.
- A review of system components, plans, and reports of key facilities. This includes:
  - Permitted discharges, including regulatory requirements
  - Treatment Facilities (4 each)
  - Pumping Stations (24 each), including force mains
  - Gravity collection system
  - Combined sewer system outfalls
- Summary of the operation and maintenance expenses based upon review of DELCORA operating records.
- An assessment of the identified assets.
- Determination and/or establishment of an original cost of construction for each asset.

Assets were identified through various sources. The WWTP assets were field inventoried and evaluated; and, supplemented with information obtained from drawings, where available. Force main sizes and quantities were taken from GIS and project drawings. Pump Stations were field inventoried

and evaluated; and, supplemented with information obtained from drawings, where available. Gravity piping costs are based on current cost of replacement and back calculated to the year of installation using the ENR Construction Cost Index.

A coding system as described in Section 300 of the Uniform System of Accounts for Class A Wastewater Utilities was used for classifying various assets. Section 300 as well as the listing of codes can be found in Appendix B. The entire Uniform System of Accounts can be found in the Digital Files.

3. SYSTEM DESCRIPTION

System Summary

DELCORA is responsible for the safe collection, transmission, treatment, and discharge of approximately 65 million gallons per day (MGD) of wastewater generated in southeastern Pennsylvania (A map of the service areas is located in Appendix A, Figure A1). DELCORA's facilities serve residential, commercial, institutional, and industrial customers in Delaware and Chester Counties. DELCORA owns and operates a system consisting of 24 pump stations and associated force mains, and 160 miles of gravity collection system mains and interceptor sewers for the conveyance of wastewater to DELCORA's Western Regional Treatment Plant (WRTP) located in Delaware County and to the Philadelphia Water Department's Southwest Water Pollution Control Plant.

Historically, DELCORA has characterized its service areas as "Eastern" and "Western". The Western Service Area includes eighteen (18) pumping stations which are owned and operated by DELCORA including Central Delaware Pump Station which can direct flow to either the WRTP, a permitted 44 MGD activated sludge wastewater treatment plant, or the City of Philadelphia's Southwest Water Pollution Treatment Plant. The Eastern Service Area include (6) six pumping stations which are owned and operated by DELCORA. The Eastern Service Area discharges to the Philadelphia Southwest Water Pollution Control Plant (SWWPCP) and the WRTP. A schematic of DELCORA's conveyance system and the connection to the treatment facilities can be found in Appendix A, Figure A2. The average annual flow in 2018 for the WRTP was 39.18 MGD and 25.76 MGD for the Eastern Service Area.

In addition to the WRTP, DELCORA owns and operates three (3) remote Treatment Plants. Corinne Village (Pocopson Preserve) located in Pocopson Township; Sheeder Tract (Riverside) located in Pocopson Township; and Springhill Farms located in Chadds Ford Township. The average annual flow for Corinne Village is 0.013 MGD; for Sheeder Tract is 0.021 MGD and for Springhill Farms is 0.042 MGD.

An aerial map of the DELCORA system showing the location of the Pump Stations and Treatment Plants is located in Appendix A, Figure A4.

4. INVENTORY OF ASSETS

4.1. WESTERN REGIONAL WASTEWATER TREATMENT PLANT

Facility Description

The DELCORA Western Regional Treatment Plant (WRTP) accepts wastewater from the DELCORA Western Service Area collection system and surrounding municipal connections as shown on the DELCORA Conveyance Plan in Section 4.7. Please note that not all pump stations in the system are owned by DELCORA. The Western Service Area includes eighteen (18) pumping stations which are owned and operated by DELCORA including Central Delaware Pump Station which can direct flow to either the WRTP or the City of Philadelphia's Southwest Water Pollution Treatment Plant. Figure A3 in Appendix A provides the location of all pump stations, including those only contract operated by DELCORA.

In recent years all of the WRTP process units and support systems have undergone significant upgrades, improvements, and rehabilitation to improve effluent quality, reduce treatment costs, and extend the service life. These upgraded systems include, but not limited to modifications to the influent screening, pump stations, aeration basins, secondary clarifiers, solids handling system, incinerator upgrades, and the utility water system. The costs of these projects are included in Section 8 of this report.

Permitted hydraulic capacity is currently 44 MGD and permitted organic discharge limit is 7,000 pounds per day of BOD5 per the NPDES permit. The design organic loading for the aeration system is 108,000 pounds BOD5 per day. (This represents the loading from the primary effluent, not WRTP influent). The influent design organic loading for the plant is 161,000 pounds BOD5 per day, based on 33% removal through the primary system. Figure 2 is a layout plan of the Treatment Plant, not all pump stations in the system are owned by DELCORA.

Treatment Plant components include:

- Grit System
- Primary Clarification
- Aeration System
  - Aeration Basins
  - Secondary Clarifiers
  - Chlorine Contact System
- Solids Handling
  - Sludge Holding Tanks
  - Dewatering
  - Incinerator

Treatment Plant Units

Grit System

The WRTP has two aerated grit and pre-aeration tanks at the WRTP. These tanks are divided into a grit chamber (approximately one third of each tank) and a pre-aeration chamber (approximately two thirds of each tank). The grit chamber tanks are each 31.6 feet long and 30 feet wide with a side water depth of 15.75 feet. Each tank also includes a fine screen, washing compactor and a horizontal screw conveyor to remove solids and debris from the influent.

Primary Clarification

There are eight primary clarifiers at the WRTP. Each primary clarifier tank is rectangular concrete units, with chain and scraper mechanisms. The units have a length of 155.5 feet, a width of 41.5 feet, and a side water depth averaging 9.50 feet. Each settling tank has a total weir length of 350 feet.

AERATION SYSTEM

The system consists of submerged aeration diffusers and piping grid, centrifugal blowers, dissolved oxygen (DO) control system, interconnection ductwork, electrical controls and blower building. The submerged diffusers (700 total) are high efficiency flat panel membrane diffusers manufactured by OVIVO Inc.

Aeration Basins

There are four aeration tanks at the WRTP. The tanks are constructed of concrete and are square in shape, with a length of 136 feet, a width of 136 feet, and a side water depth of 18.1 feet. Typical operation uses two trains of two tanks each, providing essentially a complete mix activated sludge (CMAS) configuration.

Secondary Clarifiers

There are five secondary clarifiers at the WRTP. Four clarifiers (Tanks T-15, T-16, T-17, and T-18) have a 130-foot diameter and one clarifier (Tank T-27) has a diameter of 175-feet. The four smaller clarifiers were included in the original design of the plant while the fifth larger clarifier was added in 1994. Return sludge from the bottom well of each clarifier utilize a suction pipe withdrawal mechanism.

Post Aeration Tanks

There are two (2) 48.5-ft by 48.5-ft square post-aeration tanks at the WRTP with aside water depth of 11.5 feet. The tanks are currently being used to provide additional chlorine contact time.

Chlorine Contact System

There are two (2) chlorine contact tanks at the WRTP. The tanks are rectangular with a length of 116 feet, width of 36 feet, and side water depth of 12.5 feet. The tanks are baffled to provide a long flow path and prevent short circuiting, to help in providing adequate contact time.

SOLIDS HANDLING

The WRTP uses gravity belt thickeners (GBT) for thickening the waste activated sludge (WAS) prior to dewatering and thickening. The system includes two (2) GBTs located in Building B-4.

Sludge Holding Tanks

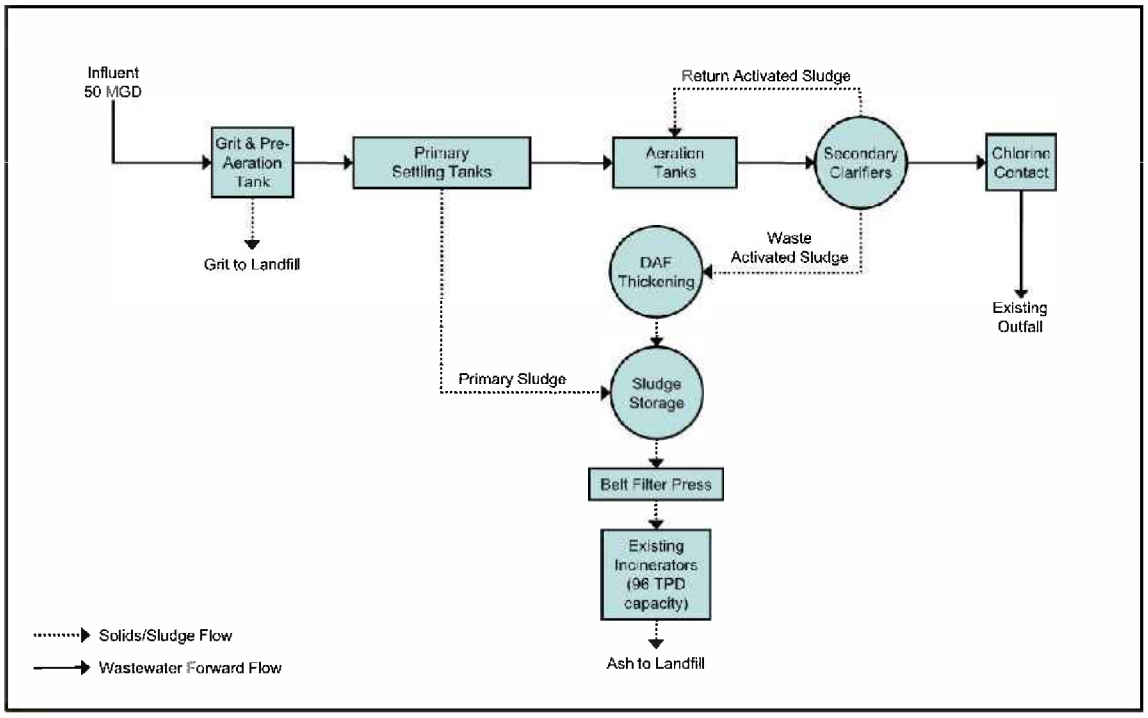
The WRTP has four (4) tanks (ET-1, ET-2, ET-3, and ET-4) currently used for sludge holding (note these tanks were originally designed as digesters prior to construction of the incinerator. Based upon the design drawings (Catania Engineering Associates, Dwg. 80700-101) each tank is 52-ft in diameter with a 18.5-ft wall height and 16-ft SWD and a 6-ft cone bottom. The liquid volume for each tank is approximately 250,000 gallons resulting in a combined liquid capacity of approximately 1,000,000 gallons.

Dewatering

The WRTP uses belt filter presses (BFPs) for dewatering primary, secondary and trucked-in sludge. There are four (4) Ashbrook-Simon-Hartley Klampress Type 85, Size 3, 2.0-meter BFPs installed in building B-3.

Incinerator

Sludge is processed by a Nichols Herreshoff Sludge Incinerator or to a container. There are two (2) incinerators with each being 22.25-foot outside diameter with 8 hearths. The units were retrofitted for the use of natural gas in February 27, 2012 for Incinerator #1 and June 1, 2012 for Incinerator #2. The incinerator emission control system was upgraded for both incinerators in 2016. The project involved the installation of a new wet scrubber, wet electrostatic precipitator, and regenerative thermal oxidizer for each incinerator.



WRTP Process and Hydraulic Evaluation Delaware County Regional Water Quality Control Authority		FIGURE 1 WRTP EXISTING BLOCK FLOW DIAGRAM

Figures 2.ppt

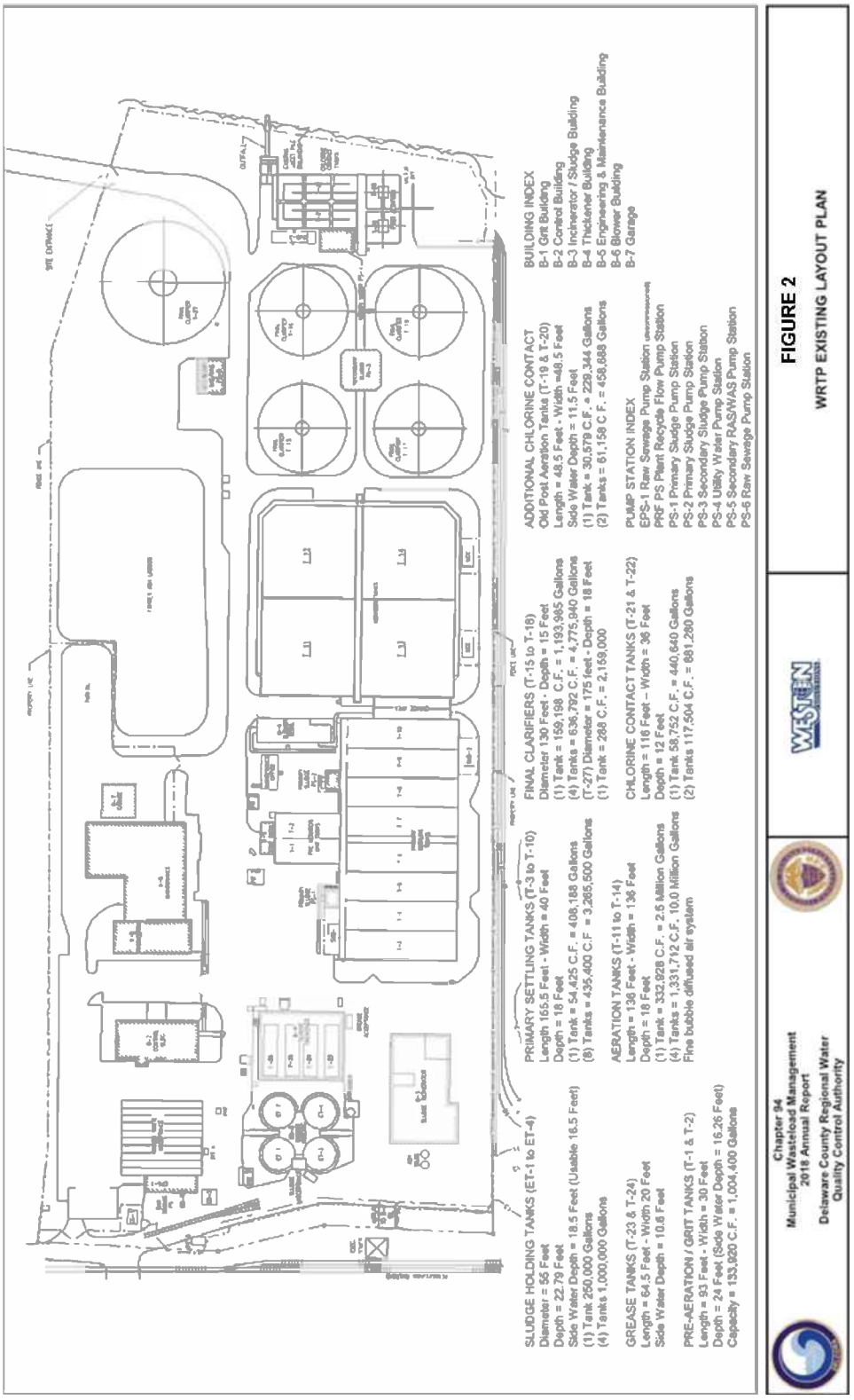

SLUDGE HOLDING TANKS (ET-1 to ET-4)
Diameter = 55 Feet
Depth = 22.79 Feet
Side Water Depth = 18.5 Feet (Usable 18.5 Feet)
(1) Tank 250,000 Gallons
(4) Tanks 1,000,000 Gallons
GREASE TANKS (T-23 & T-24)
Length = 64.5 Feet - Width 20 Feet
Side Water Depth = 10.6 Feet
PRE-AERATION / GRIT TANKS (T-1 & T-2)
Length = 93 Feet - Width = 30 Feet
Depth = 24 Feet (Side Water Depth = 16.26 Feet)
Capacity = 133,920 C.F. = 1,004,400 Gallons
PRIMARY SETTLING TANKS (T-3 to T-10)
Length 165.5 Feet - Width = 40 Feet
Depth = 18 Feet
(1) Tank = 54,425 C.F. = 408,188 Gallons
(8) Tanks = 435,400 C.F. = 3,265,500 Gallons
AERATION TANKS (T-11 to T-14)
Length = 136 Feet - Width = 136 Feet
Depth = 18 Feet
(1) Tank = 332,928 C.F. = 2.5 Million Gallons
(4) Tanks = 1,331,712 C.F. 10.0 Million Gallons
Fine bubble diffused air system
FINAL CLARIFIERS (T-15 to T-18)
Diameter 130 Feet - Depth = 15 Feet
(1) Tank = 159,198 C.F. = 1,193,985 Gallons
(4) Tanks = 636,792 C.F. = 4,775,940 Gallons
(T-27) Diameter = 175 feet - Depth = 18 Feet
(1) Tank = 288 C.F. = 2,159,000
CHLORINE CONTACT TANKS (T-21 & T-22)
Length = 116 Feet – Width = 36 Feet
Depth = 12 Feet
(1) Tank 58,752 C.F. = 440,640 Gallons
(2) Tanks 117,504 C.F. = 881,280 Gallons
ADDITIONAL CHLORINE CONTACT
Old Post Aeration Tanks (T-19 & T-20)
Length = 48.5 Feet - Width =48.5 Feet
Side Water Depth = 11.5 Feet
(1) Tank = 30,579 C.F. = 229,344 Gallons
(2) Tanks = 61,158 C.F. = 458,688 Gallons
PUMP STATION INDEX
EPS-1 Raw Sewage Pump Station
PRF PS Plant Recycle Flow Pump Station
PS-1 Primary Sludge Pump Station
PS-2 Primary Sludge Pump Station
PS-3 Secondary Sludge Pump Station
PS-4 Utility Water Pump Station
PS-5 Secondary RAS/WAS Pump Station
PS-6 Raw Sewage Pump Station
BUILDING INDEX
B-1 Grit Building
B-2 Control Building
B-3 Incinerator / Sludge Building
B-4 Thickener Building
B-5 Engineering & Maintenance Building
B-6 Blower Building
B-7 Garage
Chapter 94
Municipal Wasteload Management
2018 Annual Report
Delaware County Regional Water
Quality Control Authority
WESTON
FIGURE 2
WRTP EXISTING LAYOUT PLAN

Figure 1 – Aeration Tank

Figure 2 – Grit Building

Figure 3 – Control Building

Figure 4 – B-3 Belt Filter Press

Figure 5 – B-4 Sludge Thickening Building

Figure 6 – B-5 Maintenance Building

Figure 7 – B-6 Blower Building

Figure 8 – Blowers B-6

Figure 9 – Clarifier

Figure 10 – Floatation Unit B-4

Figure 11 – PS-1 Building

Figure 12 – PS-1 Interior

Figure 13 – PS-2 Building

Figure 14 – PS-2 Pumps

Figure 15 – PS-3 Building

Figure 16 – PS-3 Pumps

Figure 17 – PS-4 Electrical Room

Figure 18 – PS-4 Pumps

Figure 19 – PS-5 Building

Figure 20 – PS-5 Pumps

Figure 21 – Substation 1

Figure 22 – Substation 2 Exterior

Figure 23 – Substation 2 Interior

Figure 24 – Substation 3 Exterior

Figure 25 – Substation 3 Interior


Figure 26 – T-1


Figure 27 – T-3 to T-10


Figure 28 – T-20

Figure 29 – T-21 & T-22

Figure 30 – Waste Unloading Facility

4.2. CORINNE VILLAGE WASTEWATER TREATMENT PLANT (aka POCOPSON PRESERVE)

Facility Description (see attached Information Sheet)

The Corinne Village Wastewater Treatment Plant was built in 2010. The system consists of the following components:

- Influent Wet well/ Pump Station
- Influent Grinder
- Two aerated lagoons
- 2 Blowers
- Service Building
- Emergency Generator
- Drip irrigation System

Influent Wet well/Pump Station

The Influent wet well is an 6-ft diameter precast concrete structure with two Hydromatic 3 HP, 3 PH, 230 V, 84 GPM @ 23.5-ft TDH pumps. A Muffin Monster 5 HP grinder is mounted on the influent line. The pumps are control by a Hydromatic Control Panel located in the Service Building.

Service Building

The Service Building (36-ft x 24-ft) is constructed of concrete blocks with a stucco finish, the roof is constructed of asphalt shingles. The interior consists of florescent lighting, exhaust fans, electric unit heaters and a bathroom with a toilet and sink. A laboratory table with a pH meter and other standard laboratory equipment is located along one wall.

The building equipment is powered by a 250A Square D service panel. Two 50KVA transformers are located outside the building.

Aerated Lagoon System

The Aerated Lagoon system is an Environetics two lagoon system rated for 20,212 Gallons Per Day (.020 MGD). The system consists of a primary aeration lagoon (0.28 Acres) with floating tube diffusers and baffles and a secondary lagoon (0.18 acres) with two 15 HP floating mechanical aerators. The floating tube diffusers air is supplied by two 7.5 HP Gardner Denver rotary lobe blowers located in the service building

Generator

The generator is a Cummins 132 KW /98 KVA unit located on the west side of service building. An integral 145 gallon diesel fuel tank is located below the generator. A Cummins Power Automatic Transfer Switch (ATS) is located in the service building.

Drip Irrigation System

The drip irrigation system consists of a 9.5-acre field located to the northeast of the treatment facility. The field has a wetted area of 3.765 acres with 64,800 feet of tubing in 12 zones.

The effluent from the secondary lagoon is treated by an Amiad cartridge filter. Two 7.5 HP Fairbanks Morse Vertical Turbine Pumps, 60 GPM @ 188 TDH supply the water to the drip irrigation system.

Figure 1 – Influent Pump Station

Figure 2 – Influent Pump Station

Figure 3 – Drip Irrigation Pumps

Figure 4 – Secondary Lagoon

Figure 5 - Drip Irrigation Field

Figure 6 - Drip Irrigation Field

Figure 7 - Generator

Figure 8 - Drip Irrigation Control Panel

Figure 9 - Blowers

Figure 10 - Drip Irrigation Filters

Figure 11 – Flow Meter Readout & Chart Recorder

Figure 12 – Service Building

Corinne Village WWTP aka Pocopson Preserve

CODE		UNIT	DESCRIPTION	YEAR INSTALLED	COMMENTS
	Treatment processes				
		Headworks			
		facility description	Environetics two lagoon aeration system, American "Perc-Rite" Drip Despersal System located on a drip field. Design - 20,212 GPD. Facility constructed 2010.		
		Grinder unit	Muffin Monster located in wet well.		
		Pump Station	6' dia. Wetwell, precast concrete		
		Pumps	Hydromatic S4NVX300EC, 3 HP, 3 ph, 230V, 84 GPM@23.5' TDH,		
		controls	Floats		
		Control Panel	Hydromatic		
		valve pit	6' x 10' precast concrete with 5' x 4' aluminu hatch; 2 gate and 2 check valves		
		Treatment Units			
		Structure	Primary (12,000 SF, 0.28 acres) and Secondary (8,000 SF, 0.18 acres) Aeration lagoons		
		Manufacturer	Environetics floating baffle System		
		Description	two lagoon system with primary treatment with floating tubular aeration diffusers, secondary lagoon with floating mechancal aerators		
		Drip Irrigation system	"Perc-Rite"		
		size	3.765 wetted acres, 64,800 feet of tubing in 12 zones (total field size = 9.5 acres)		
		Controls	Wall mounted control panel with interactive LCD screen		
		Pumps (2)	Fairbanks Morse 7100UW vertical turbine, 60 GPM @188' TDH, 7.5 HP, 3 ph, 230-460V		
		Wetwell	8' x 8' precast concrete		
		valve pit	6' x 6' precast concrete		
		filter	Amiad cartridge filter		
		Blowers			
		Description	two - Gardner Denver Sutorbilt Model GABHOSA, 7.5 HP		
		Treatment Plant Service building			
		Dimensions	36' x 24'		
		Main Structure Material	Concrete Block with stucco exterior		
		Roof type	asphalt shingle		
		Doors	steel		
		lighting	florescent		
		HVAC	exhaust fans with electric unit heaters		
		Bathroom	includes toilet and sink		
		Laboratory/Office	integral to building, wih pH meter and basic laboratory equipment		
			eyewash		
		Electric			
		Transformer	Interior Square D 30 KVA		
			exterior - two 50 KVA		
		Main Disconnect	Distribution Panel 250 AMP		
		Panel LP	100 AMP		
		TVSS	Square D Surgelogic		
		Alarm	OmniSite Cellular monitor		
		Disinfection System			
		Chlorination system	N/A		
		Dosing Pump			
		electrical/controls			
		Dechlorination chem			
		Dosing Pump			
		Generator			
		Manufacturer	Cummins		
		size	132 HP, 98 KW		
		fuel	Diesel		
		fuel tank size	145 gallons		
		ATS	Cummins Power Command		
		Flow meter	Honeywell Chart Recorder		

4.3. SHEEDER TRACT WASTEWATER TREATMENT PLANT (aka RIVERSIDE)

Facility Description (see attached Information Sheet)

The Sheeder Tract Wastewater Treatment Plant was built in 2007. The system consists of the following components:

- Influent Wet well/ Pump Station
- Influent Grinder
- Two aerated lagoons
- Three pressurized Sand Filters
- 2 Blowers
- Service Building
- Emergency Generator
- Sodium hypochlorite disinfection system
- Spray irrigation System

Influent Wet well/Pump Station

The Influent wet well is an 8-ft diameter x 18-ft deep precast concrete structure with two Fairbanks Morse 5 HP, 3 PH, 460 V, 125 GPM @ 44-ft TDH pumps. A Franklin Miller TM8508 3 HP grinder is mounted on the influent line. The pumps are controlled by a Healy Ruff Control Panel located in the Service Building.

Service Building

The Service Building (30-ft x 50-ft) is constructed of finished concrete blocks (30-ft x 50-ft) with asphalt shingles. The interior consists of fluorescent lighting, exhaust fans, GE 12,000 BTU/hour heat pump unit and a bathroom with a toilet and sink. A laboratory table with a pH meter and other standard laboratory equipment is located along one wall.

The building equipment is powered by a 400A Square D service panel and a 50KVA transformer located east of the building.

Aerated Lagoon System

The Aerated Lagoon system is an Aqua Aerobics two lagoon system rated for 45,000 Gallons Per Day (0.045 MGD). The system consists of a primary aeration lagoon (0.28 Acres) with floating tube diffusers and a secondary lagoon (1.75 acres) with two 15 HP floating mechanical aerators. The floating tube diffusers are supplied by two 5 HP Gardner Denver rotary lobe blowers located in the service building.

Service Building

The Service Building is a 24-ft x 118-ft prefabricated steel building on a concrete block foundation. The building is divided into the office laboratory; the generator/ maintenance / Electrical room; the compressor room; and a UV disinfection area on the lower level.

The building has (4) 3-ft x 7-ft steel man doors; (1) 6-ft x 7-ft steel double door; (1) electric operated overhead steel roll up door (10-ft x 10-ft).

The office is combined with the lab area. A men's shower/bathroom is adjacent to the office.

The laboratory is equipped with lab tables with sinks; refrigerator; various lab glassware, testing equipment, scales, oven, reagents and microscopes.

Disinfection System

A sodium hypochlorite chlorination system is located in the Service Building. It consists of a 100 gallon Polypropylene storage tank and a LMI 1.3 GPH dosing pump.

Generator

The generator is a Cummins 175 KW /218 KVA unit located in the service building. An integral 300 gallon diesel fuel is located below the generator. A Cummins Power Automatic Transfer Switch (ATS) is located in the service building.

Spray Irrigation System

The spray irrigation system consists of two grass spray fields, a spray field in a wooded area, two turbine pumps and a booster pump.

The grass spray fields are located adjacent to the treatment facilities. The fields are approximately 3 Acres and 2.5 Acres. A third Spray field is located approximately 2000 feet away on the north side of the development in a wooded area. The effluent from the secondary lagoon is treated by (3) Yardney 300 gallon pressurized sand filters. (2) 50 HP Fairbanks Morse Vertical Turbine Pumps and a 7.5 Grundfos booster pump supply the water to the spray field nozzles.

A Climatronics weather system is utilized to control spray cycles.

Figure 1 – System Monitor / Control Panel

Figure 2 – Pump Control Panel

Figure 3 – VFDs

Figure 4 – Generator

Figure 5 -Sand Filters

Figure 6 - Blowers

Figure 7 – Service Building

Figure 8 – Spray Field Pumps

Figure 9 – Secondary Lagoon

Figure 10 - Primary Lagoon

Figure 11 – Spray Field (adjacent to Treatment Plant)

Figure 12 – Spray Field in Woods

Sheeder Tract WWTP aka Riverside

CODE		UNIT	DESCRIPTION	YEAR INSTALLED	COMMENTS
	Treatment processes				
		Headworks			
		facility description	Aqua Aerobics two lagoon aeration system, spray irrigation onto 3 separate sprayfield. 0.045 GPD. Put in service July, 2007		
		Headworks			
		Wetwell	8' diameter x 18' deep precast concrete		
		Influent Pumps	Fairbanks Morse 5 HP, 3 PH, 460 V, 125 GPM @ 44' TDH		
		Grinder	Franklin Miller TM8508 3 HP		
		Controls	Healy Ruff Constrol Panel		
		Treatment Units			
		Structure	Lagoons		
		Manufacturer	Aqua Aerobics		
		Description	two aerated lagoons, primary (12,000 SF, 0.28 acres), secondary lagoon (76,000 SF, 1.75 acres)		
		Sand filters	Three - Yardney pressurized 42 CF (300 gallon) Sand Filters		
		Blowers			
		Description	Gardner Denver GAFHDPA, 5 HP, total 2		
		Treatment Plant Service building			
		Dimensions	30' x 50'		
		Main Structure Material	concrete block		
		Roof type	asphalt shingle		
		Doors	steel		
		lighting	florescent		
		HVAC	exhaust fans, GE Heat Pump wall unit 12,000 BTU/Hr		
		Laboratory/Office	interior room with ph meter and basic laboratory equipment		
		Bathroom	toilet, sink, 12 gal electric hot water heater		
		Electric			
		MCC	Square D		
		Main Disconnect	400 AMP		
		Transformer	EGS Hevi-Duty 50 KVA		
		Alarm	Verbatim		
		Disinfection System			
		Chlorination system	sodium Hypochlorite		
		Dosing Pump	LMI C101		
		electrical/controls			
		Dechlorination chem			
		Dosing Pump			
		Generator			
		Manufacturer	Cummins		
		size	175 KW/218 KVA		
		fuel	Diesel		
		fuel tank size	300 gallons		
		ATS	Cummins Power Command		
		SPRAY IRRIGATION SYSTEM			
		Spray pumps	Two Fairbanks Morse Verticle Turbine Pumps Model 7100, 50 HP, 1200 RPM, 3 ph, 460 V		
			One - Grundfos 7.5 HP Booster Pump		
		Pump Controls	Two - Saftronics VFD control panels		
		Aerators	Two - 15 HP floating (Secondary lagoon), underwater floating tube diffusers (Aqua Aerobic)		
		Weather system	Climatronics		

4.4. SPRINGHILL FARMS WASTEWATER TREATMENT PLANT

Facility Description (see attached Information Sheet)

The Springhill Farms Wastewater Treatment Plant was constructed in 1988. The system consists of the following components:

- Influent wet well/ Pump Station
- Bar Screen
- Extended Aeration Treatment System
- 5 Blowers
- Service Building
- Emergency Generator
- Chlorination and Dechlorination system

Influent Wet well/Pump Station

The Influent wet well is a 7-ft x 7-ft precast concrete structure with two (2) Hydromatic model S4 3 HP, 3 PH, 230 V grinder pumps. A bar screen is located at the head of the treatment tanks. The pumps are control by a Usemco, Inc. Control Panel located in the Service Building.

Service Building

The Service Building (32-ft x 20-ft) is constructed of concrete block with a stucco finish, the roof is constructed of asphalt shingles. The interior consists of a blower room which also houses the pump control panels and equipment storage, fluorescent lighting, exhaust fans, electric unit heaters, 10-gallon hot water heater, chlorination storage and dosing pump, de-chlorination storage and dosing pump and instrumentation.

The building and equipment are powered by a 300A Square D service panel.

A prefabricate wooded shed is located between the two process trains containing the liquid aluminum sulfate tank (325 gallons), dosing pump and bags of sodium bicarbonate.

Extended Aeration System

The treatment system is a Dutchland Extended Aeration Process rated for 100,000 GPD (0.10 MGD). The process consists of a bar screen, splitter box, equalization tanks, aeration, settling, return activated sludge (RAS) pumps and sludge storage. There are two trains in parallel, each train is constructed of precast concrete and are approximately 85-ft long x 16-ft wide. Process controls include a GLI model turbidity meter, Aluminum Sulfate addition and Sodium Bicarbonate addition.

Blowers

There are 5 total blowers that feed air to the treatment process. (3) 10 HP Roots Model 45 U-RAI supply air to the aeration tanks, (2) 5 HP blowers supply air to the Equalization Tank and the Sludge Holding Tank.

Generator

The generator is a Cummins 100 KW, 125 KVA, 200 HP unit located outside on the south side of service building. An integral 308-gallon diesel fuel tank is located below the generator. A Cummins Power Automatic Transfer Switch (ATS) is located outside on the south wall of the service building.

Chlorination System

A precast concrete chlorine contact tank is located west of the service building. The tank is segmented for chlorine contact, de-chlorination contact and a wet well for the discharge pumps. A V-Notch weir is located in one of the chambers for flow measurement. A Badger Ultrasonic sensor is mounted in the top slab of the tank. The flow meter read out and totalizer are mounted in the service building. Chlorine dosage is controlled by a HACH CL17 chlorine analyzer.

The effluent pumps are (2) Hydromatic 1 HP pumps discharging into a 4-inch forcemain.

Figure 1 – Influent Pump Station

Figure 2 – Bar Screen

Figure 3 – Treatment Chambers (South Train)

Figure 4 – Treatment Facility

Figure 5 -Liquid Alum Tank

Figure 6 - Storage Shed

Figure 7 – Service Building

Figure 8 – Chlorine Contact / Discharge Chamber

Figure 9 - Generator

Figure 10 - ATS

Figure 11 – Electrical Main Panel

Figure 12 – Instrumentation and Controls

Figure 13 – Sodium Hypochlorite Storage Tank

Figure 14 - Sodium Thiochlorite Storage Tank

Figure 15 – Influent Pump Control Panel

Springhill Farms WWTP

CODE		UNIT	DESCRIPTION	YEAR INSTALLED	COMMENTS
	Treatment processes				
		facility description	Dutchland extended aeration system consisting of a influent pump station with grinder pumps, spitter box, 2 system trains with flow equalization, aeration, sludge storage, RAS pumps, chlorination and dechlorination. Installed in 1988. The plant is permited for 100,000 GPD.	1988	
		Headworks			
		Wetwell	7' x 7' x 15' (est) deep Wet Well		
		Influent Pumps	3 HP, 230 V, 3ph. Hydromatic Model S4		
		screen unit	Bar Screen		
		Other	Davit Crane		
		Treatment Units			
		Structure	Precast Concrete two (approx. 85' x 16')		
		Manufacturer	Dutchland		
		Description	Equalization, Aeration, Clarification, Chlorination, Dechlorination		
		RAS Controls	air lift pumps		
		Blowers			
		Description	Roots Model 45 U-RAI, Three 10 HP and t 5 HP		
		Treatment Plant Service building			
		Dimensions	32' x 20'		
		Main Structure Material	concrete block with stucco exterior		
		Roof type	asphalt shingle		
		Doors	steel		
		lighting	interior - metal halide and florescent, exterior - wall packs		
		HVAC	exhaust fan		
		Laboratory/Office	interior space with flow meter chart, flow display unit, turbidity monitor, sodium hypochlorite holding tank, Sodium Thiosulfate decholination holding tank, chlorine analyzer, LMI dosing pumps		
		Electric			
		MCC	N/A		
		Main Disconnect	300 Amp main - Square D		
		Alarm	Verbatim Series VSS		
		Disinfection System			
		Chlorination system	liquid Sodium Hypochlorite		
		Dosing Pump	LMI		
		electrical/controls	Hach CL17		
		Dechlorination chem	Sodium thiosulfate		
		Dosing Pump	LMI		
		Generator			
		Manufacturer	Cummins		
		size	100 KW, 125 KVA, 200 HP		
		fuel	Diesel		
		fuel tank size	308 gallons		
		ATS	Cummins Power Command		
		Flow meter	Badger Ultrasonic		
		turbidity meter	GLI Model 53		

MASTER PUMP STATION LIST

Pump Station # (Facility ID)	Geographic Area	Municipality	Station Name
PS-A	Western	Rose Valley	Brookhaven Road
PS-B	Western	Rose Valley	Old Mill
PS-1	Western	Chester	Chester
PS-2	Western	Chester	8th Street
PS-3	Western	Chester	PS-6 WRTP
PS-4	Western	Chester	Feltonville
PS-7	Eastern	CDCA	Central Delaware County
PS-8	Eastern	MA	Muckinipates
PS-9	Eastern	DCJA	Darby Creek
PS-10	Western	Eddystone	Eddystone
PS-11	Western	Marcus Hook	Marcus Hook
PS-12	Western	Trainer	Price Street
PS-13	Western	Trainer	Smith Street
PS-16	Western	Chester	Broomall Street
PS-22	Western	Marcus Hook	Delaware Avenue Ejector Sta.
PS-23	Western	Marcus Hook	Viscose Village
PS-24	Western	Chester	Stadium (aka Riverfront)
PS-26	Western	Rose Valley	Longpoint Lane Ejector Sta.
PS-27	Western	Aston	Chester-Ridley Creek
PS-28	Eastern	Edgmont Twp	Bridle Way (EPS-1)
PS-29	Eastern	Edgmont Twp	Runnymeade (EPS-2)
PS-30	Eastern	Edgmont Twp	Dream Valley (EPS-3)
PS-31	Western	Rose Valley	Rose Valley
PS-33	Western	Chester	Delaware River Interceptor Bypass

4.5. PUMP STATIONS

PS-1 - Chester PS

Facility Description (see attached Information Sheet)

PS-1 is wet well / dry well station located at 113 W. 2nd St, Chester, PA originally installed in 1976. The pump station has three (3) 14,000-GPM Allis-Chambers Horizontal Non-Clog Centrifugal pumps installed in 2004. There are two vertical sewage pumps which at one time pumped directly to the Delaware River, but are now decommissioned.

The station has dual gravity grit collection channels and two (2) influent Duperon screens, which were replaced in 2017. The grit collection equipment is carbon steel construction in poor condition. The grit collection bucket chains were recently replaced. The grit buckets and housings are in very poor condition. The grit conveyor was recently updated. The pump station wet well is unlined concrete (1,394 Sq. Ft.) and is covered with FRP grating in serviceable condition.

The three Horizontal Non-Clog Centrifugal pumps take suction from the wet well. Each pump has an 18-inch Pratt cone valves, a 24-inch motorized knife gate suction valves, and a 24-inch motorized Dezurik plug discharge valves. The pumps have 400 HP, 460Vmotors, which are VFD controlled.

The PLC based control panel was manufactured by General Electric. The station has a new magnetic flow meter. SCADA communications are by directional radio and fiber optics.

The pump system has a separate Grit/Screen Building (1,936 Sq. Ft.) The Building (4,226 Sq. Ft.) is constructed of Pre-Cast Panels in good condition. Membrane roof was recently replaced. The buildings have fluorescent lighting and painted carbon steel doors. There are two overhead cranes to service the screen area and the pump room. The dry well is multi-level and extends below grade.

The pump station has dual utility feeds and the Automatic Transfer Switch (ATS) switches between the two. The pump VFDs have been installed in the near past. The bulk of the station's MCC is original and in need of replacement.

The entire property is surrounded by 522 LF of galvanized steel chain link fence.

Property Condition

A majority of the equipment has been upgraded in the 2000's. The building, pumps and electrical systems are in good condition; the HVAC systems are in fair condition.

Figure 1 – Bar Screen Discharge

Figure 2 – Bar Screens

Figure 3 – Pump Assembly

Figure 4 – Building Boilers

Figure 5 – System Display Monitor

Figure 6 – Pump Control Panel

Figure 7 – MCC

Figure 8 – Bar Screen Control Panel

Figure 9 – Knife Gate Valve

Figure 10 – Screening Building

Figure 11 – Primary Settling Tanks

Figure 12 – Overhead Crane

PUMP STATION #		PS-1		**Scheduled Visit Date:**	10/25/2019	FRI
Station Name		Chester	Phone #			
Location		113 W. 2nd St, Chester, PA				
Start Up Date		1965				
CODE	**SUBCODE**	**PUMP STATION**				**COMMENTS**
371.3		**PUMP(S)**				
		Condition	Orginal			
		No. of Pumps	3			
		Type	Horizontal Non-Clog Centrifugal			
		Pump Manufacturer	Allis-Chalmers			
		Pump Model Number	SSEH			
		Year Installed	2004			
		Pump GPM	14000 GPM			
		Pump TDH Ft.	87'			
		Outlet Size	18"			
		Motor HP				
		Motor Voltage	460 V			
371.3		Pump Control (VFD?)	VFD			
370.3		**WET WELL**				
		Condition	Good			
		Size	1,394 Sq. Ft.			
		Material	Concrete			
		Lined	N/A			
		Hatch	N/A			
		Vent	N/A			
		Rails	N/A			
		Cable	N/A			
		Piping	Steel			
371.3		**CONTROL PANEL**				
		Manufacturer	General Electric			
		Year Installed	2009			
		Model	Fanuc			
361		**INFLUENT PIPING (IF KNOWN)**				
		Material				
		Diameter				
371		**SCREEN**				
		Manufacturer	(2) Duperon screens			2 Screens
		Model				
		HP				
		Year Installed	2017			
371		**CRANE/HOIST**				
		Manufacturer	Clevland Tramrail			
		Model	2 Ton Crane			
		Year Installed	1976			
360		**VALVES (DISCHARGE)**				
		Type	Cone	Knife Gate	Plug	
		Manufacturer	Pratt		Dezurik	
		Size	18"	24"	24"	
		#	3	January 3, 1900	January 3, 1900	
		Year Installed	2008	May 29, 1905	May 29, 1905	
355		**GENERATOR**				
		Manufacturer	N/A			
		Generator KW	N/A			
		Generator KVA	N/A			
		Fuel Tank (Gals)	N/A			
355		ATS (manf/model #)	N/A			
		Year Installed	N/A			
360		**FORCE MAIN**				
		Force Main Size	48"	54"		
		Force Main Mat.	DI	DI		
		Length in Feet	620	12,030		
		Year Installed	2009	2009		
		Discharge Point				
		Discharge Point Location				

CODE	SUBCODE	PUMP STATION				COMMENTS
354.2		**BUILDING**	Pump Building			
		Condition	Good			
		Size	4,226 Sq. Ft.			
		Main Structure Material	Pre-Cast Panels			
		Roof Type	Membrane			
		Roof Condition	Good			
		Doors (number /material)	6/ Steel			
		Lighting (Type)	Flourescent			
		Year Installed	1976			
		ELECTRICAL				
371.3		MCC	Westinghouse 1800 A Switchboard & Westinghouse MCC			
396		Alarm System (manf/ model)	APC SCADA Based			
		Year Installed				
354.3		**HVAC**	Electrical Room			
		Condition	Aging			
		Type	Mechanical Cooling			
		Manufacturer				
		Year Installed	1976			
364		Flow Meter	Krohne Mag Meter			
364		Chart Recorder	SCADA			
354.3		Hydrants	N/A			
		GROUNDS				
354.3		Fence Length	522'			
		Fence Type	Galvanized Steel Chain Link			
		Year Installed	1976			
354.3		Paving and Walkways	Asphalt			
371.3		**ODOR CONTROL**				
		Manufacturer	N/A			
		Type	N/A			
		MISCELLANEOUS	**DESCRIPTION OF FACILITY**			
		Other Buildings	Grit/ Screen Building (1,936 Sq. Ft.) in Good condition			
		Spare Parts				
		Vac Truck Suitable				
		Does the PS have a Sanitary Overflow? Size and Material?				
OVERALL BUILDING AND FACILITY ASSESSMENT						
2002 - Install Bar Screen						
2004 - PS Upgrade						
2004 - PS Conveyor Installation						
2009 - Forcemain Replacement						
2009 - PS & Valve Replacement						
2009 - Bulkhead Replacement						
Overall condition of the two building and equipment is good. Improvements have been made several time since the original construction. Some sections of concrete is showing minor deterioration, oiginal grit chamber has significant metal deterioration.						

PS-2 - 8th Street PS

Facility Description (see attached Information Sheet)

PS-2 is located at 99 W. 8th St. Chester, PA and is equipped with two (2) 330-GPM Submersible pumps. Wastewater is discharged through a 4-inch force main. The original pump station was installed in 1996. The pump station controls were upgraded in 2003.

The pump wet well is Poured Concrete (8-ft x 8-ft x 15 ft D (est.)) with 2 hatchways. The control panel is manufactured by Flygt. The pump system has a separate Valve Pit with a 5-ft x 4-ft Aluminum Hatch with (2) 4-inch gate valves.

There is no building at this facility.

There is no generator or Automatic Transfer Switch (ATS) at this facility.

The entire property is surrounded by a 24-foot x 24-foot x 8-foot high cyclone fence.

Property Condition

Electronics and pumps were upgraded in 2003 and 1996 respectively and are in good condition. Wet well concrete and hatch are in fair condition.

Figure 1 – Facility Site

Figure 2 – Pump Control Panel

Figure 3 – Pump Control Panel

Figure 4 – Gate Valves & By-Pass Connection

PUMP STATION #		PS-2		**Scheduled Visit Date:**	10/23/2019	WED
Station Name		8th Street	Phone #			
Location		99 W. 8th St. Chester, PA				
Start Up Date		1965				
CODE	**SUBCODE**	**PUMP STATION**				**COMMENTS**
371.3		**PUMP(S)**				
		Condition				
		No. of Pumps	2			
		Type	Submersible			
371.3		Pump Manufacturer	Flygt			
		Pump Model Number				
		Year Installed	1996			
		Pump GPM	330			
		Pump TDH Ft.	22			
		Outlet Size				
		Motor HP	3 HP			
		Motor Voltage	240V (3) Ph			
371.3		Pump Control (VFD?)	Floats			
370.3		**WET WELL**				
		Condition				
		Size	8' x 8' x 15' D			5' x 4' Alum Hatch, estimated depth
		Material	Poured Concrete			
		Lined				
		Hatch				
		Vent				
		Rails				
		Cable				
		Piping				
371.3		**CONTROL PANEL**				
		Manufacturer	Flygt			
		Year Installed	1996			RTU Unit and other electronics upgraded in 2003
		Model/Serial number				
361		**INFLUENT PIPING (IF KNOWN**	N/A			
		Material				
		Diameter				
371		**GRINDER**	N/A			
		Manufacturer				
		Model/Serial number				
		HP				
		Year Installed				
371		**CRAIN/HOIST**	N/A			
		Manufacturer				
		Model/Serial number				
		Year Installed				
360		**VALVES (DISCHARGE)**		**Valve Pit**		
		Type	Gate			
		Manufacturer				
		Size	4"			
		#	2			
		Year Installed	1996			
355		**GENERATOR**	N/A			
		Manufacturer				
		Generator KW				
		Generator KVA				
		Fuel Tank (Gals)				
355		ATS (manf/model #)				
		Year Installed				
360		**FORCE MAIN**				
		Force Main Size	8"			
		Force Main Mat.	CIP			
		Length in Feet	465			
		Year Installed	1951			
		Discharge Point				
		Discharge Point Location				

CODE	SUBCODE	PUMP STATION				COMMENTS
354.2		**BUILDING**	N/A			
		Condition				
		Size				
		Main Structure Material				
		Roof Type				
		Roof Condition				
		Doors (number /material)				
		Lighting (Type)				
		Year Installed				
		ELECTRICAL				
371.3		MCC	Breaker Panel			
396		Alarm System (manf/ model)	Verbatim			
		Year Installed	1996			
354.3		**HVAC**	N/A			
		Condition				
		Type				
		Manufacturer				
		Year Installed				
364		Flow Meter				
364		Chart Recorder				
354.3		Hydrants				
		GROUNDS				
354.3		Fence Length	24' x 24' x 8' H			
		Fence Type	Cyclone			
		Year Installed				
354.3		Paving and Walkways				
371.3		**ODOR CONTROL**	N/A			
		Manufacturer				
		Type				
		MISCELLANEOUS	**DESCRIPTION OF FACILITY**			
		Other Buildings	Valve Pit w/ 5' x 4' Alum Hatch			
		Spare Parts	No			
		Vac Truck Suitable	Yes			
		Does the PS have a Sanitary Overflow? Size and Material?				
OVERALL BUILDING AND FACILITY ASSESSMENT						
Electronics and pumps have been upgraded in 2003 and 1996 respectively. Wet well concrete and hatch in fair condition.						

PS-3 – WWTP PS-6

Facility Description (see attached Information Sheet)

PS-3 is submersible pump station located at the Western Regional Treatment plant and was installed in 2017. The station is in like new condition. The station has (4) 5,200GPM, 250 HP submersible pumps. The station accepts septage and other hauled wastes and has a separate pump station to hand this waste. The treatment plant's incoming main and incoming power switchgear is located on the second floor of the pump station building.

The influent is screened by (2) Duperon upright bar screens. The septage is pumped into a channel with (1) Duperon Flex Rake Screen. The two flows are combined and flow into the lined concrete wet well.

Pumps are 460 volts and controlled by Yaskawa VFDs. The system is monitored and controlled by a PLC base control system with SCADA communication. The treatment plant has a dual feed electrical service.

The Building is constructed of CMU with and EPIS stucco finish. The Membrane roof in new condition. The building has well separated screening, pump station electrical controls, and plant substation electrical switch gear areas. Each area has its own forced air ventilation system. The electrical rooms have mechanical cooling. The building contains LED lighting.

The station has a Strobic Air Tri-Stack high volume air/ exhaust dilution system to collect and disperse odors.

The facility sits within the property boundary of the WRTP.

Property Condition

The building and all mechanical and electrical equipment are in good condition.

Figure 1 – Electric Room

Figure 2 – Pump Control Room

Figure 3 – Odor Control Fans

Figure 4 – Bar Screens

Figure 5 – Screenings Disposal

Figure 6 – Pump Station Wet Well

Figure 7 – Wet Well

Figure 8 – System Monitor

Figure 9 – Cooling Units

Figure 10 – Plant's Main Incoming Power Switchgear

Figure 11 – H2S Removal System

Figure 12 – Building

PUMP STATION #		PS-3		Scheduled Visit Date:	10/25/2019	FRI
Station Name		PS-6	Phone #			
Location		WWTP				
Start Up Date		1965				
CODE	**SUBCODE**	**PUMP STATION**				**COMMENTS**
371.3		**PUMP(S)**				
		Condition	New			
		No. of Pumps	4			
		Type	Submersible			
371.3		Pump Manufacturer	Flygt			
		Pump Model Number				
		Year Installed	2017			
		Pump GPM	5,200			
		Pump TDH Ft.				
		Outlet Size				
		Motor HP	250 HP			
		Motor Voltage	460 V			
371.3		Pump Control	VFD			
370.3		**WET WELL**				
		Condition	New			
		Size				
		Material	Concrete			
		Lined	Epoxy			
		Hatch	Aluminum			
		Vent	N/A			
		Rails	Stainless Steel			
		Cable	Stainless Steel			
		Piping	Ductile Iron			
371.3		**CONTROL PANEL**				
		Manufacturer	General Electric			
		Year Installed	2017			
		Model	Not Accessible; Presume GE 90-70			
361		**INFLUENT PIPING**				
		Material	Ductile Iron			
		Diameter				
371		**SCREEN**				
		Manufacturer	(2) Duperon screens, (1) Duperon Flex Rake Screen (Sludge)			
		Model				
		HP				
		Year Installed	2017			
371		**CRAIN/HOIST**				
		Manufacturer				
		Model				
		Year Installed				
360		**VALVES (DISCHARGE)**				
		Type	Plug			
		Manufacturer				
		Size				
		#				
		Year Installed				
355		**GENERATOR**				
		Manufacturer	N/A			
		Generator KW	N/A			
		Generator KVA	N/A			
		Fuel Tank (Gals)	N/A			
355		ATS (manf/model #)	N/A			
		Year Installed	N/A			
360		**FORCE MAIN**	N/A			
		Force Main Size				
		Force Main Mat.				
		Length in Feet				
		Year Installed				
		Discharge Point				
		Discharge Point Location				

CODE	SUBCODE	PUMP STATION				COMMENTS
354.2		**BUILDING**				
		Condition	Good			
		Size				
		Main Structure Material	CMU			
		Roof Type	Membrane			
		Roof Condition	New			
		Doors (number /material)	5/ Steel			
		Lighting (Type)	LED			
		Year Installed	2017			
		ELECTRICAL				
371.3		MCC	Eaton 13.2 KV Switchgear & Eaton 3000 A Distrubution Switchboard			
396		Alarm System (manf/ model)	APC SCADA Based & Edwards Fire/ Security Panel			
		Year Installed	2017			
354.3		**HVAC**				
		Condition	Good			
		Type	Centrifugal Fan/ Air Duct			
		Manufacturer				
		Year Installed	2017			
364		Flow Meter	(2) KROHNE Mag Meters			
364		Chart Recorder	SCADA			
354.3		Hydrants	N/A			
		GROUNDS				
354.3		Fence Length				
		Fence Type				
		Year Installed				
354.3		Paving and Walkways	Asphault			
371.3		**ODOR CONTROL**				
		Manufacturer	Strobic Air			
		Type	Dilution			
		MISCELLANEOUS	**DESCRIPTION OF FACILITY**			
		Other Buildings				
		Spare Parts				
		Vac Truck Suitable				
		Does the PS have a Sanitary Overflow? Size and Material?			No	

PS-4 - Feltonville PS

Facility Description (see attached Information Sheet)

PS-4 is located at 2432 Concord Rd. Chester, PA and is equipped with two (2) 200 GPM 10 HP Vaughan Chopper pumps. The pump station was installed in 1970.

The pump wet well is poured concrete (5-foot x 10-foot x 17.5-foot deep) with 3-foot x 4.5-foot aluminum hatchway. The control panel was a generic manufacturer. There are (2) 4-inch iron check valves, (2) 4-inch PVC call valves, installed in 1970.

There is no building at this facility. There is no generator or Automatic Transfer Switch (ATS) at this facility.

The entire property is surrounded by a 31-foot x 18-foot x 6-foot high cyclone fence.

Property Condition

The facility is in fair condition.

Figure 1 – Pump Station Site

Figure 2 – Dry Pit from Top Entrance

Figure 3 – RTU Panel

Figure 4 – Pump and Motor in Dry Pit

Figure 5 –View Up from Dry Pit

Figure 6 – Pump Control Panel

PUMP STATION #		PS-4		**Scheduled Visit Date:**	10/22/2019	TUE
Station Name		Feltonville	Phone #			
Location		2432 Concord Rd. Chester, PA				
Start Up Date		1965				
CODE	**SUBCODE**	**PUMP STATION**				**COMMENTS**
371.3		**PUMP(S)**				
		Condition	Good			
		No. of Pumps	2			
		Type	Chopper			
		Pump Manufacturer	Vaughan			
		Pump Model Number	WKO			
		Year Installed	1970			
		Pump GPM	200			
		Pump TDH Ft.				
		Outlet Size	4"			
		Motor HP	10 HP			
		Motor Voltage	240V			
371.3		Pump Control (VFD?)	Floats			
370.3		**WET WELL**				
		Condition				
		Size	5' x 10' x 17.5' D			Dry Well 7' x 8' x 17.5' D Poured Concre
		Material	Poured Concrete			
		Lined				
		Hatch	3' x 4.5' Alum			
		Vent	3 - 4" steel			
		Rails				
		Cable				
		Piping				
371.3		**CONTROL PANEL**				VFD1-2
		Manufacturer	Unknown			RTU Unit
		Year Installed				
		Model/Serial number				
361		**INFLUENT PIPING (IF KNOWN)**				
		Material				
		Diameter				
371		**GRINDER**	N/A			
		Manufacturer				
		Model/Serial number				
		HP				
		Year Installed				
371		**CRAIN/HOIST**	N/A			
		Manufacturer				
		Model/Serial number				
		Year Installed				
360		**VALVES (DISCHARGE)**				
		Type	IRON Check	PVC Ball		
		Manufacturer				
		Size	4"	4"		
		#	2	2		
		Year Installed				
355		**GENERATOR**	N/A			
		Manufacturer				
		Generator KW				
		Generator KVA				
		Fuel Tank (Gals)				
355		ATS (manf/model #)				
		Year Installed				
360		**FORCE MAIN**				
		Force Main Size	8"			
		Force Main Mat.	CIP			
		Length in Feet	925			
		Year Installed	1970			
		Discharge Point				
		Discharge Point Location				

CODE	SUBCODE	PUMP STATION				COMMENTS
354.2		**BUILDING**	N/A			
		Condition				
		Size				
		Main Structure Material				
		Roof Type				
		Roof Condition				
		Doors (number /material)				
		Lighting (Type)				
		Year Installed				
		ELECTRICAL				
371.3		MCC	Breaker Panel			
396		Alarm System (manf/ model)	RTU Unit			
		Year Installed				
354.3		**HVAC**				
		Condition				
		Type				
		Manufacturer				
		Year Installed				
364		Flow Meter				
364		Chart Recorder				
354.3		Hydrants				
		GROUNDS				
354.3		Fence Length	31' x 18' x 6' H			
		Fence Type	Cyclone			
		Year Installed				
354.3		Paving and Walkways				
371.3		**ODOR CONTROL**	N/A			
		Manufacturer				
		Type				
		MISCELLANEOUS	**DESCRIPTION OF FACILITY**			
		Other Buildings				
		Spare Parts				
		Vac Truck Suitable				
		Does the PS have a Sanitary Overflow? Size and Material?				
OVERALL BUILDING AND FACILITY ASSESSMENT						
Pump station, wet well, pump controls, electrical and HVAC are all in fair condition.						

PS-7 - Central Delaware County PS

Facility Description (see attached Information Sheet)

PS-7 is wet well / dry well located at 563 W. Sellers Ave, Ridley Park, PA and is equipped with four (4) 9,266-GPM vertically shafted non-clog sewage pumps manufactured by Allis-Chambers. The original pump station was installed in 1980 and was upgraded in 2001. Wastewater is discharged through a 36 -inch DIP force main. The discharge flow can be directed to either the Western Regional Treatment Plant or the City of Philadelphia for treatment. During high flow periods, motorized plug valves automatically divert the flow to Philadelphia. The motorized plug valves and flow meters are located in underground concrete vaults.

The pump wet well is un-lined concrete (600 Sq. Ft.). The station influent is screened with two Duperon Upright Screen units. The screens and screenings conveyors were place in 2017.

The four vertical Non-Clog Centrifugal pumps take suction from the wet well. Each pump has a 14-inch Pratt cone valves, 24-inch motorized knife gate suction valves, and a 24-inch motorized Dezurik plug discharge valves.

The pumps have 450 HP 460V motors, which are VFD controlled. The PLC based control panel was manufactured by General Electric. The station has a magnetic flow meter. SCADA communications are redundant with directional radio and fiber optics.

The pump station has dual utility feeds and the Automatic Transfer Switch (ATS) switches between the two. The pump VFD's and the station's MCC are General Electric and were replaced with the 2006 upgrade.

The Building (2,400 Sq. Ft.) is constructed of Brick/ CMU in good condition. The membrane roof was recently replaced. The screen area/ wet well and pump room are well separated. A new electrical room was added in 2001. The building contains fluorescent lighting. The doors are painted carbon steel. . The ventilation systems are a ducted forced air system is in fair condition. The pump room has an overhead gantry crane. The dry well is multi-level and extends below grade.

The entire property is surrounded by 800 LF of galvanized steel chain link fence.

Property Condition

There have been significant upgrades made to the pump station over the last 10 years. The facility is in good condition.

Figure 1 – Building Front

Figure 2 – Building Rear

Figure 3 – Screen Units

Figure 4 – MCC (In Background)

Figure 5 –Harmonic Filter

Figure 6 – Pump & Discharge Piping

Figure 7 – Pump

Figure 8 – Electric Room

Figure 9 –Pump Control Panel

Figure 10 –Transformers

Figure 11 –Pump Room

Figure 12 – Discharge Manifold

PUMP STATION #		PS-7		Scheduled Visit Date:	10/25/2019	FRI
Station Name		Central Delaware County	Phone #			
Location		563 W. Sellers Ave, Ridley Park, PA				
Start Up Date		1980				
CODE	**SUBCODE**	**PUMP STATION**				**COMMENTS**
371.3		**PUMP(S)**				
		Condition	Good			
		No. of Pumps	4			
		Type	Vertically Shafted Non-Clog Sewage Pump			
371.3		Pump Manufacturer	Allis-Chalmers			
		Pump Model Number	NSWV 16x14			
		Year Installed	2001			
		Pump GPM	9266			
		Pump TDH Ft.	150'			
		Outlet Size	14"			
		Motor HP	450 HP			
		Motor Voltage	460 V			
371.3		Pump Control (VFD?)	VFD			
370.3		**WET WELL**				
		Condition	Good			
		Size	600 Sq. Ft.			
		Material	Concrete			
		Lined	No			
		Hatch	Yes			
		Vent	N/A			
		Rails	N/A			
		Cable	N/A			
		Piping	Ductile Iron			
371.3		**CONTROL PANEL**				
		Manufacturer	General Electric			
		Year Installed	June 23, 1905			
		Model	Funac			
361		**INFLUENT PIPING (IF KNOWN)**				
		Material	RCP			
		Diameter	48"			
371		**SCREEN**				
		Manufacturer	Duperon			2 Screens
		Model				
		HP				
		Year Installed	2017			
371		**CRAIN/HOIST**				
		Manufacturer	American			
		Model	Overhead Gantry 4 Ton			
		Year Installed	1980			
360		**VALVES (DISCHARGE)**				
		Type	(Suction) Knife Gate	(Pump Control) Cone	(Discharge) Plug	
		Manufacturer		Pratt	Dezurik	
		Size	24"	14"	24"	
		#	4	4	4	
		Year Installed	1980	2001	1980	
355		**GENERATOR**				
		Manufacturer	N/A			
		Generator KW	N/A			
		Generator KVA	N/A			
		Fuel Tank (Gals)	N/A			
355		ATS (manf/model #)	N/A			
		Year Installed	N/A			
360		**FORCE MAIN**				
		Force Main Size	36"			
		Force Main Mat.	PCCP			
		Length in Feet	9,820			
		Year Installed	1977			
		Discharge Point				
		Discharge Point Location				

CODE	SUBCODE	PUMP STATION				COMMENTS
354.2		**BUILDING**				
		Condition	Good			
		Size	2,400 Sq. Ft.			
		Main Structure Material	Brick/ CMU			
		Roof Type	Membrane			
		Roof Condition	Good			
		Doors (number /material)	7/ Steel			
		Lighting (Type)	Flourescent			
		Year Installed	1980			
		ELECTRICAL				
371.3		MCC	Square-D/ Penn Panel Unit Substation & GE 7700 MCC			
396		Alarm System (manf/ model)	APC SCADA Based & Gamewell/ Zans Fire/ Security Panel			
		Year Installed				
354.3		**HVAC**	Electrical Room			
		Condition	Aging			
		Type	Centrifugal Fan Air Ducts			
		Manufacturer				
		Year Installed	1980			
364		Flow Meter	Mag Meter			
364		Chart Recorder	SCADA			
354.3		Hydrants	N/A			
		GROUNDS				
354.3		Fence Length	813'			
		Fence Type	Galvanized Steel Chain Link			
		Year Installed	1980			
354.3		Paving and Walkways	Asphalt			
371.3		**ODOR CONTROL**				
		Manufacturer	N/A			
		Type	N/A			
		MISCELLANEOUS	**DESCRIPTION OF FACILITY**			
		Other Buildings				
		Spare Parts				
		Vac Truck Suitable				
		Does the PS have a Sanitary Overflow? Size and Material?				
2006 - Switchgear Modification						
2006 - PS Upgrades						
2009 - Harmonic Filter Installation						
2012 - Controls System Upgrades						
OVERALL BUILDING AND FACILITY ASSESSMENT						
There have been significant upgrade made to the pump station over the last 10 years. The facility is in good condition.						

PS-8 - Muckinipates PS

Facility Description (see attached Information Sheet)

PS-8 is wet well / dry well station located at 100 Amosland Rd. Norwood, PA and has three (3) 4,200 GPM vertically shafted non-clog sewage pumps manufactured by Flght-Xylem. The pump station was installed in 1980 and pumps replaced in 2012. Wastewater is discharged through 30-inch DIP force main and is directed to the City of Philadelphia for treatment.

The pump wet well is un-lined concrete (600 square-feet). The station influent is screened with two (2) Duperon Upright Screen units. The screens and screenings conveyors were replaced in 2017.

The four vertical Non-Clog Centrifugal pumps take suction from the wet well. Each pump has a 12-inch Pratt cone valve, 24-inch motorized knife gate suction valves, and an 18-inch motorized Dezurik plug discharge valves

The pumps have 100 HP 460V motors, which are VFD controlled. The PLC based control panel was manufactured by General Electric. The station has a magnetic flow meter. SCADA communications are redundant with directional radio and internet cable. The flow meter is located in a separate concrete vault.

The pump station has dual utility feeds and the Automatic Transfer Switch (ATS) switches between the two. The pump VFDs are as manufactured by Siemens. The station's MCC are General Electric and are original to the station

The building (1,944 square-feet) is constructed of Brick/CMU and membrane roof in good condition. The screen area/wet well and pump room are well separated. The building contains fluorescent lighting. The doors are painted carbon steel. The ventilation systems are a ducted forced air system is in fair condition. The pump room has an overhead gantry crane. The dry well is multi-level and extends below grade.

The entire property is surrounded by 750 feet of galvanized steel chain link fence. The access drive is in poor condition. The paved area around the station is in fair condition.

Property Condition

The building, pump equipment and electrical components are in good condition. The HVAC systems are aging.

Figure 1 – Pump Building

Figure 2 – Wet Well

Figure 3 – Transformers

Figure 4 – Bar Screens

Figure 5 – Building Interior / Overhead Crane

Figure 6 - Building Interior / MCC

Figure 7 – Pump Motor / MCC

Figure 8 - VFD

Figure 9 – VFD Controls

Figure 10 - MCC

Figure 11 – Dry Pit from Top

Figure 12 – Pump Room

Figure 13 – Pump

Figure 14 - Pump

PUMP STATION #		PS-8		**Scheduled Visit Date:**	10/25/2019	FRI
Station Name		Muckinipates	Phone #			
Location		100 Amosland Rd. Norwood, PA				
Start Up Date		1980				
CODE	**SUBCODE**	**PUMP STATION**				**COMMENTS**
371.3		**PUMP(S)**				
		Condition	Good			
		No. of Pumps	3			
		Type	NSWV			
371.3		Pump Manufacturer	Xylem-Flygt			
		Pump Model Number	200			
		Year Installed	2012			
		Pump GPM	4200 GPM			
		Pump TDH Ft.	51'			
		Outlet Size	12"			
		Motor HP	100 HP			
		Motor Voltage	460 V			
371.3		Pump Control (VFD?)	VFD			
370.3		**WET WELL**				
		Condition	Good			
		Size	600 Sq. Ft.			
		Material	Concrete			
		Lined	No			
		Hatch	Yes			
		Vent	N/A			
		Rails	N/A			
		Cable	N/A			
		Piping	Ductile Iron			
371.3		**CONTROL PANEL**				
		Manufacturer	General Electric			
		Year Installed	2012			
		Model	Fanuc			
361		**INFLUENT PIPING (IF KNOWN)**				
		Material	RCP			
		Diameter	36"			
371		**SCREEN**				
		Manufacturer	Duperon			2 Screens
		Model				
		HP				
		Year Installed	2017			
371		**CRAIN/HOIST**				
		Manufacturer	American			2 Gantries
		Model	Overhead Gantry 2 Ton			
		Year Installed	1980			
360		**VALVES (DISCHARGE)**				
		Type	(Suction) Knife Gate	(Pump Control) Cone	(Discharge) Plug	
		Manufacturer		Pratt	Dezurik	
		Size	24"	12"	18"	
		#	3	3	3	
		Year Installed	1980	2012	1980	
355		**GENERATOR**				
		Manufacturer	N/A			
		Generator KW	N/A			
		Generator KVA	N/A			
		Fuel Tank (Gals)	N/A			
355		ATS (manf/model #)	N/A			
		Year Installed	N/A			
360		**FORCE MAIN**				
		Force Main Size	48"			
		Force Main Mat.	PCCP			
		Length in Feet	8,800			
		Year Installed	1977			
		Discharge Point				
		Discharge Point Location				

CODE	SUBCODE	PUMP STATION				COMMENTS
354.2		**BUILDING**				
		Condition	Good			
		Size	1,944 Sq. Ft.			
		Main Structure Material	Brick/ CMU			
		Roof Type	Membrane			
		Roof Condition	Good			
		Doors (number /material)	7/ Steel			
		Lighting (Type)	Flourescent			
		Year Installed	1980			
		ELECTRICAL				
371.3		MCC	GE 13.2 KV Unit Substation & GE 7700 MCC			
396		Alarm System (manf/ model)	APC SCADA Based			
		Year Installed				
354.3		**HVAC**	Electrical Room			
		Condition	Aging			
		Type	Centrifugal Fan Air Ducts			
		Manufacturer				
		Year Installed	1980			
364		Flow Meter	Krohne Mag Meter			
364		Chart Recorder	SCADA			
354.3		Hydrants	N/A			
		GROUNDS				
354.3		Fence Length	758'			
		Fence Type	Galvanized Steel Chain Link			
		Year Installed	1980			
354.3		Paving and Walkways	Asphalt			
371.3		**ODOR CONTROL**				
		Manufacturer	N/A			
		Type	N/A			
		MISCELLANEOUS	**DESCRIPTION OF FACILITY**			
		Other Buildings				
		Spare Parts				
		Vac Truck Suitable				
		Does the PS have a Sanitary Overflow? Size and Material?				
2001 - Emergency Repairs						
2002 - PS Conveyor						
2003 - PS Flowmeter Replacement						
2009 - PS Control System Upgrades						
OVERALL BUILDING AND FACILITY ASSESSMENT						
Equipment was updated in 2012 and is in good condition, HVAC system is aging						

PS-9 - Darby Creek PS

Facility Description (see attached Information Sheet)

PS-9 is wet well / dry well located at Calcon-Hook Road. and Tribbett Avenue, Sharon Hill, PA and has three (3) 25,000 GPM vertically shafted non-clog sewage pumps manufactured by Allis Chambers. The pump station was installed in 1980 and pumps replaced in 2006. Wastewater is discharged through 66-inch PCCP force main and is directed to the City of Philadelphia for treatment.

The pump wet well is unlined concrete (600 square-feet). The station influent is screened with two (2) Duperon Upright Screen units. The screens and screenings conveyors were place in 2017.

The three vertical Non-Clog Centrifugal pumps take suction from the wet well. Each pump has a 24-inch Pratt cone valves, 36-inch motorized non-rising stem gate suction valves, and a 30-inch motorized Dezurik plug discharge valves

The pumps have 700 HP 460V motors, which are VFD controlled. The PLC based control panel was manufactured by General Electric. The station has a magnetic flow meter. SCADA communications are redundant with directional radio and internet cable. The flow meter is in a separate concrete vault.

The generator is an MTU-Onsite Energy 1000 KW unit with a 3,400-gallon tank. The Automatic Transfer Switch (ATS) is part of the switchgear. The pump VFDs are as manufactured by Siemens. The station's MCC are General Electric and are original to the station

The building (5,600 square-feet) is constructed of Brick/CMU and membrane roof in good condition. The screen area/wet well and pump room are well separated. The building contains fluorescent lighting. The doors are painted carbon steel. The ventilation systems are a ducted forced air system is in fair condition. The pump room has an overhead gantry crane.

The entire property is surrounded by 876 feet of galvanized steel chain link fence. The access drive is in poor condition. The paved area around the station is in fair condition.

Property Condition

The building, pumps and electrical equipment are in good condition. The HVAC systems are aging.

Figure 1 – Pump Building Front

Figure 2 – Screenings Collection

Figure 3 – Pump Room

Figure 4 – Control / Electric Room

Figure 5 – System Monitor

Figure 6 - VFD

Figure 7 - MCC

Figure 8 – Pump Motor

Figure 9 – Pump Volute

Figure 10 – Pump Volute

Figure 11 - Transformers

Figure 12 - Generator

Figure 13 – Influent Chamber

Figure 14 - Pump Room / Overhead Crane

PUMP STATION #		PS-9		**Scheduled Visit Date:**	10/25/2019	FRI
Station Name		Darby Creek	Phone #			
Location		Calcon-Hook Rd. and Tribbett Ave. Sharon Hill, PA				
Start Up Date		1975				
CODE	**SUBCODE**	**PUMP STATION**				**COMMENTS**
371.3		**PUMP(S)**				
		Condition	Good			
		No. of Pumps	3			
		Type	SSE-V			
371.3		Pump Manufacturer	Flygt			
		Pump Model Number	08-112-312-580			
		Year Installed	2019			
		Pump GPM	25000 GPM			
		Pump TDH Ft.	70'			
		Outlet Size	24"			
		Motor HP	700 HP			
		Motor Voltage	460 V			
371.3		Pump Control (VFD?)	VFD			
370.3		**WET WELL**				
		Condition	Good			
		Size	600 Sq. Ft.			
		Material	Concrete			
		Lined	No			
		Hatch	Yes			
		Vent	N/A			
		Rails	N/A			
		Cable	N/A			
		Piping	Ductile Iron			
371.3		**CONTROL PANEL**				
		Manufacturer	General Electric			
		Year Installed	2009			
		Model	Funac			
361		**INFLUENT PIPING (IF KNOWN)**				
		Material	RCP			
		Diameter	60			
371		**SCREEN**				
		Manufacturer	Duperon			2 Screens
		Model				
		HP				
		Year Installed	2017			
371		**CRANE/HOIST**				
		Manufacturer	Cleveland Tramrail			
		Model				
		Year Installed	1975			
360		**VALVES (DISCHARGE)**				
		Type	(Suction) Gate	(Pump Control) Cone	(Discharge) Plug	
		Manufacturer		Rodney Hunt		
		Size	36"	24"	30"	
		#	3	3	3	
		Year Installed	1975	2009	1975	
355		**GENERATOR**				
		Manufacturer	MTU-Onsite Energy			
		Generator KW	1000 KW			
		Generator KVA	1250 KVA			
		Fuel Tank (Gals)	3,400 Gal			
355		ATS (manf/model #)	Part of Switchgear			
		Year Installed	2014			
360		**FORCE MAIN**				
		Force Main Size	66"	66"		
		Force Main Mat.	PCCP	PCCP		
		Length in Feet	10,040	2,985		
		Year Installed	1972	1974		
		Discharge Point				
		Discharge Point Location				

CODE	SUBCODE	PUMP STATION				COMMENTS
354.2		**BUILDING**				
		Condition	Good			
		Size	5,616 Sq. Ft.			
		Main Structure Material	Brick/ CMU			
		Roof **T**ype	Membrane			
		Roof Condition	Good			
		Doors (number /material)	9/ Steel			
		Lighting (**T**ype)	Flourescent			
		Year Installed	1975			
		ELECTRICAL				
371.3		MCC	GE 13.2 KV Switch Gear & 2000 A GE Switchboard; GE 7700 MCC & Eaton/ Cutler-Hammer 2100 MCC			
396		Alarm System (manf/ model)	APC SCADA Based			
		Year Installed	2007			
354.3		**HVAC**	Electrical Room			
		Condition	Aging			
		Type	Centrifugal Fan Air Ducts			
		Manufacturer				
		Year Installed	1975			
		Flow Meter	Mag Meter			
364		Chart Recorder	SCADA			
364		Hydrants	N/A			
354.3		**GROUNDS**				
354.3		Fence Length	876'			
		Fence **T**ype	Galvanized Steel Chain Link			
		Year Installed	1975			
354.3		Paving and Walkways	Asphalt			
371.3		**ODOR CONTROL**				
		Manufacturer	N/A			
		Type	N/A			
		MISCELLANEOUS	**DESCRIPTION OF FACILITY**			
		Other Buildings				
		Spare Parts				
		Vac **T**ruck Suitable				
		Does the PS have a Sanitary Overflow? Size and Material?				
2002 - PS Screw Conveyor						
OVERALL BUILDING AND FACILITY ASSESSMENT						
A majority of of the pump station was upgraded in 2006, the bar screen in 2017 and is in good condition.						

PS-10 - Eddystone PS

Facility Description (see attached Information Sheet)

PS-10 is located at 738 Eddystone Avenue, Eddystone, PA and is equipped with three (3) approximately 700 GPM, 25 HP Fairbanks Morse vertical shaft centrifugal pumps located in a dry pit. Wastewater is discharged through an 8-inch DIP. The original pump station was installed in 1931. Pump controls, discharge piping and other building components were upgraded recently.

The pump wet well is poured concrete in the lower level of the station. A mechanical Bar Screen (non-operational) is located in the wetwell. The control panel is manufactured by QuickPanel. There are 6-inch check valves on the discharge. The influent line to the wet well contains a Franklin-Miller grinder which operated via a 2 HP hydraulic unit.

The pumps are controlled by a Total Control Quick Panel, pump flows are controlled by TLC VFDs. Discharge flow is monitored by a Krohne magmeter.

The building (30-ft x 30-ft) is constructed of exterior brick, interior concrete and a flat roof in unknown condition. The building contains LED lighting.

The Generator is a Kohler 125 KW unit with an integral 250-gallon diesel tank. The Automatic Transfer Switch (ATS) is manufactured by ASCO.

The entire property is surrounded by a 300 ft. cyclone fence.

Property Condition

The building was in good condition. The pumps and motors are aged, but run quietly. Pump electronics and valves were replaced recently and are in good condition. The generator is in in poor condition.

Figure 1 – Building

Figure 2 – (Upper Floor) Pump Motos

Figure 3 – System Monitor

Figure 4 – System Control Panel

Figure 5 -VFD Controllers

Figure 6 – (Lower Floor) Pump Room

Figure 7 – Generator

Figure 8 – Influent Chamber, Bar Screen

PUMP STATION #		PS-10		**Scheduled Visit Date:**	11/6/2019	WED
Station Name		Eddystone	Phone #			
Location		736 Eddystone Ave., Eddystone, PA				
Start Up Date						
CODE	**SUBCODE**	**PUMP STATION**				**COMMENTS**
371.3		**PUMP(S)**				
		Condition	aged			
		No. of Pumps	3			
		Type	vertical shaft centrifugal			
371.3		Pump Manufacturer	Fairbanks Morse			
		Pump Model Number	K3X1-071717-0			
		Year Installed	2007			
		Pump GPM	700	estimated		
		Pump TDH Ft.				
		Outlet Size				
		Motor HP	25			
		Motor Voltage	230/460			
371.3		Pump Control (VFD?)	Transducer			
370.3		**WET WELL**				automated bar screen not operable.
		Condition				
		Size				
		Material	poured concrete			
		Lined				
		Hatch				
		Vent				
		Rails				
		Cable				
		Piping				
371.3		**CONTROL PANEL**				
		Manufacturer	QuickPanel			
		Year Installed				
		Model/Serial number				
361		**INFLUENT PIPING (IF KNOWN)**				
		Material				
		Diameter				
371		**GRINDER**				
		Manufacturer	Franklin-Miller			
		Model/Serial number	Hydraulic			
		HP	2			
		Year Installed				
371		**CRAIN/HOIST**				
		Manufacturer				
		Model/Serial number				
		Year Installed				
360		**VALVES (DISCHARGE)**				
		Type				
		Manufacturer				
		Size				
		#				
		Year Installed				
355		**GENERATOR**				
		Manufacturer	Kohler			
		Generator KW	125			
		Generator KVA	156			
		Fuel Tank (Gals)	250			
355		ATS (manf/model #)	ASCO			
		Year Installed				
360		**FORCE MAIN**				
		Force Main Size	8"			
		Force Main Mat.	CIP			
		Length in Feet	1921			
		Year Installed	1931			
		Discharge Point				
		Discharge Point Location				

354.2		**BUILDING**				
		Condition	good			
		Size	30' x 30'			
		Main Structure Material	Brick			
		Roof Type	flat			
		Roof Condition				
		Doors (number /material)				
		Lighting	LED			
		Year Installed	1931			
		ELECTRICAL				
371.3		MCC	400 Amp			
396		Alarm System (manf/ model)	OmniSite			
		Year Installed				
354.3		**HVAC**				
		Condition				
		Type	roof top exhaust			
		Manufacturer				
		Year Installed				
364		Flow Meter				
364		Chart Recorder				
354.3		Hydrants				
		GROUNDS				
354.3		Fence Length				
		Fence Type	Cyclone			
		Year Installed				
354.3		Paving and Walkways				
371.3		**ODOR CONTROL**				
		Manufacturer				
		Type				
		MISCELLANEOUS	**DESCRIPTION OF FACILITY**			
		Other Buildings				
		Spare Parts				
		Vac Truck Suitable				
		Does the PS have a Sanitary O				
OVERALL BUILDING AND FACILITY ASSESSMENT						
Building was in good condition. Pumps were aged, but ran quiet. Motors were also aged, but quiet. Pump valves and electronics were replaced in 2007.						
Generator in poor condition						

PS-11 - AKA Marcus Hook PS

Facility Description (see attached Information Sheet)

PS-11 is located at 401 Penn Ave. Marcus Hook, PA and is equipped with (2) 3,300 GPM, 60 HP Vaughan centrifugal pumps. Wastewater is discharged through an 8" DIP force main. The original pump station was installed in 1955. The pumps, electrical controls and other pump station components were upgraded in 2016.

The pump wet well is cast in place concrete (26-ft x 16-ft x 28-ft deep with 6-ft high fence with no hatchway. The control panel is a GE Quickpanel, pump flow is regulated by Digital Operator VFDs. The system is monitored via a SCADA system. There are (2) check valves, (2) discharge valves, (1) Influent gate valve, (2) (Suction) valves, installed in 2016. The influent line to the wet well contains a Muffin Monster Hydraulic grinder which operated via a 5 HP hydraulic unit.

The Building (original 29.5ft x 17.6-ft, addition 16-ft x 17.6-ft) is constructed of yellow brick masonry exterior with concrete foundation, porcelain brick interior in older section and green porcelain tile interior in newer section, concrete dry pit lower level and flat roof in unseen condition. The building contains four (4) LED, original; four (4) fluorescent, new lighting and one (1) double door; one (1) man door, original; (1) new double door, aluminum door. A two (2)-ton Yale overhead crane is located in the building.

The Generator is an MTU On-site 150 KW unit with 400-gallon diesel tank. The Automatic Transfer Switch (ATS) is manufactured by ASCO, J03ATSA30400FG0C. the Generator was installed in 2016.

The entire property is surrounded by approximately a 96-foot x 146-foot, 8-foot high steel chain link fence with 3 strands of barbed wire in poor condition.

Property Condition

The building, pumps and electrical controls were upgraded in 2016 and are in good condition.

Figure 1 – Building Front

Figure 2 – Building & Generator

Figure 3 – Influent Chamber

Figure 4 – Building Rear

Figure 5 -MCC

Figure 6 - Building Interior

Figure 7 – Electrical Panels

Figure 8 – Pump Control Panel

Figure 9 – Pump Gate Valves

Figure 10 - Dry Pit Pump

Figure 11 – Discharge Pump

Figure 12 – Discharge Piping

PUMP STATION #		PS-11		**Scheduled Visit Date:**	10/22/2019	TUE
Station Name		Marcus Hook	Phone #			
Location		401 Penn Ave. Marcus Hook, PA				
Start Up Date		1965				
CODE	**SUBCODE**	**PUMP STATION**				**COMMENTS**
371.3		**PUMP(S)**				
		Condition	good			
		No. of Pumps	2			
		Type	Centrifugal			
371.3		Pump Manufacturer	Vaughan			
		Pump Model Number	PE8K10CS			
		Year Installed	10/2016			
		Pump GPM	3300			
		Pump TDH Ft.	56			
		Outlet Size	8"			updated
		Motor HP	60			
		Motor Voltage	240V (3) Ph			
371.3		Pump Control (VFD?)	Flow Matcher VFD 1&2, Digital Operator JVOP-180 ALM			transducer
370.3		**WET WELL**				
		Condition	good			
		Size	16'W x 26'L x 28'D with 6' high fence			
		Material	cast in place concrete			
		Lined	unlined			
		Hatch	no			
		Vent	no			
		Rails	no			
		Cable	no			
		Piping	16" steel welded, 16" DIP			
371.3		**CONTROL PANEL**				VFD 1-2
		Manufacturer	Quickpanel			
		Year Installed	2016			
		Model/Serial number				
361		**INFLUENT PIPING (IF KNOWN)**				
		Material				
		Diameter				
371		**GRINDER**				
		Manufacturer	Muffin Monster Hydraulic			
		Model/Serial number				
		HP	5			
		Year Installed				
371		**CRAIN/HOIST**				
		Manufacturer	Yale 2-ton			
		Model/Serial number	1C2F34L20			
		Year Installed				
360		**VALVES (DISCHARGE)**				
		Type	Check	Discharge	Influ. Gate	Suction
		Manufacturer				
		Size				
		#	2	2	1	2
		Year Installed				
355		**GENERATOR**	YES			
		Manufacturer	MTU On-site			
		Generator KW	150			
		Generator KVA	187.5			
		Fuel Tank (Gals)	400 gal diesel			
355		ATS (manf/model #)	ASCO J03ATSA30400FG0C			
		Year Installed	~2017			
360		**FORCE MAIN**				
		Force Main Size	30"	36"	36"	16"
		Force Main Mat.	PCCP	PCCP	DI	CIP
		Length in Feet	2,250	5,695	17,693	94
		Year Installed	1977	1977	2000	1977
		Discharge Point				
		Discharge Point Location				

CODE	SUBCODE	PUMP STATION				COMMENTS
354.2		**BUILDING**				
		Condition	good			
		Size	original 29'-6" x 17'-8", addition 16' x 17'-8"			
		Main Structure Material	yellow brick masonry exterior with concrete foundation, porcelain brick interior in older section and green porcelain tile interior in newer section,concrete dry pit lower level			
		Roof Type	flat			
		Roof Condition	unseen			
		Doors (number /material)	(1) double door; (1) man door, original; (1) new double door, aluminum			
		Lighting (Type)	(4) LED, original; (4) fluorescent, new			
		Year Installed				
		ELECTRICAL				
371.3		MCC	Eaton Pow-r-Line, PRL-C, 240/120V, 600A			
396		Alarm System (manf/ model)	Scada/RTU			
		Year Installed	2016			
354.3		**HVAC**				
		Condition	good			
		Type	roof top power ventilation, eletric unit heaters			
		Manufacturer				
		Year Installed				
364		Flow Meter	Krohne IFC magmeter			
364		Chart Recorder				
354.3		Hydrants				
		GROUNDS				
354.3		Fence Length	approximately 96 x 146			
		Fence Type	8'H steel chain link with 3 strands of barbed wire, poor condition			
		Year Installed				
354.3		Paving and Walkways	good			
371.3		**ODOR CONTROL**	N/A			
		Manufacturer				
		Type				
		MISCELLANEOUS	**DESCRIPTION OF FACILITY**			
		Other Buildings				
		Spare Parts				
		Vac Truck Suitable				
		Does the PS have a Sanitary Overflow? Size and Material?				
OVERALL BUILDING AND FACILITY ASSESSMENT						
2013 - PS Upgrades						
Overal building is in good condition, interior has been improved as part of the 2016 equipment upgrades.						
Exterior asphalt has moderate cracking, original fencing has some rust.						

PS-12 - Price Street PS

Facility Description (see attached Information Sheet)

PS-12 is located at 3639 Post Road Trainer, PA and is equipped with (3) 320-GPM, 7.5 HP Flygt pumps. Wastewater is discharged through a 8" force main. The pump station was installed in 2009.

The pump wet well is pre-cast concrete (1,500 gal) with safety grate and an 8-foot x 4.5-foot hatchway. The pump control panel is manufactured by Flygt, pump flow is controlled Siemens VFDs. System controls are monitored by a GE Quickpanel display.

There is no building at this facility, but an (8-foot x 8-foot) enclosure constructed of fiberglass with a fiberglass roof in good condition. The enclosure contains 1 Fiberglass door.

The Generator is a Cummins 98 KW, 132 HP unit with a 235-gallon integral diesel tank. The Automatic Transfer Switch (ATS) is a Cummins Power Command.

The entire property is surrounded by a 70-foot x 42-foot, 6-foot high cyclone fence.

Property Condition

The building, pumps and controls are less than ten years old and are in good condition.

Figure 1 – Pump Station & Wet Well

Figure 2 – Bar Screen

Figure 3 – Generator

Figure 4 – Flow Meter

Figure 5 – Control Panel Building

Figure 6 – Pump Control Panel

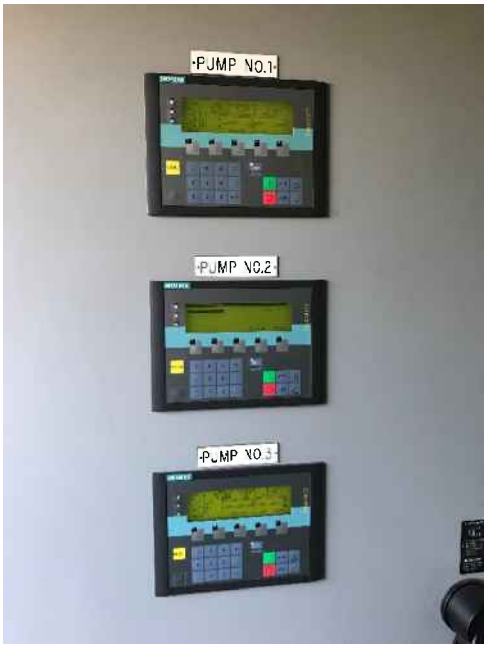


Figure 7 – Pump VFD's

Figure 8 – Electrical Main & Panels

PUMP STATION #		PS-12		**Scheduled Visit Date:**	10/22/2019	TUE
Station Name		Price Street	Phone #			
Location		3639 Post Rd. Trainer, PA				
Start Up Date		1965				
CODE	**SUBCODE**	**PUMP STATION**				**COMMENTS**
371.3		**PUMP(S)**				
		Condition	Good			
		No. of Pumps	3			
371.3		Pump Manufacturer	Flygt			
		Pump Model Number				
		Type	Submersible			
		Year Installed	2009			
		Pump GPM	320			
		Pump TDH Ft.	39 ft			
		Outlet Size	3 x 4"			
		Motor HP	7.5			
		Motor Voltage				
371.3		Pump Control (VFD?)				
370.3		**WET WELL**				
		Condition				
		Size	1,500 gal			10' 8" x 8'-8" x approx. 18' Deep
		Material	Pre-cast			
		Lined	No			
		Hatch	Safety Grate - 8' x 4.5'			
		Vent	DIP			
		Rails	SS			
		Cable				
		Piping				
371.3		**CONTROL PANEL**				
		Manufacturer	Siemans			
		Year Installed	2009			
		Model/Serial number				
361		**INFLUENT PIPING (IF KNOWN)**				
		Material	PVC			
		Diameter	8"			
371		**GRINDER**	Bar Screen			Pre-cast Concrete - 6' Ø x 12.8' Deep
		Manufacturer				
		Model/Serial number				
		HP				
		Year Installed				
371		**CRAIN/HOIST**				
		Manufacturer	2 - Thern Davit Crane			Galv. Stl.
		Model/Serial number				
		Year Installed				
360		**VALVES (DISCHARGE)**	N/A			
		Type				
		Manufacturer				
		Size				
		#				
		Year Installed				
355		**GENERATOR**	YES			
		Manufacturer	Cummins			
		Generator KW	98			
		Generator HP	132			
		Fuel Tank (Gals)	235			36" x 7' x 19"
355		ATS (manf/model #)	Diesel - Cummins Power Command			
		Year Installed	2009			
360		**FORCE MAIN**				
		Force Main Size	10"			
		Force Main Mat.	DI			
		Length in Feet	1,345			
		Year Installed	2007			
		Discharge Point				
		Discharge Point Location				

CODE	SUBCODE	PUMP STATION				COMMENTS
354.2		**BUILDING**				
		Condition	good			
		Size	8' x 8'			
		Main Structure Material	Fiberglass			
		Roof Type	Fiberglass			
		Roof Condition	good			
		Doors (number /material)	1 - Fiberglass			
		Lighting (Type)				
		Year Installed	2009			
		ELECTRICAL				
371.3		MCC				
396		Alarm System (manf/ model)	Crystal Ball			
		Year Installed				
354.3		**HVAC**				
		Condition				
		Type	exhaust fan			
		Manufacturer				
		Year Installed				
364		Flow Meter				
364		Chart Recorder				
354.3		Hydrants				
		GROUNDS				
354.3		Fence Length	70' x 24' x 70' x 42'			
		Fence Type	Cyclone - 6' H			
		Year Installed	2009			
354.3		Paving and Walkways				
371.3		**ODOR CONTROL**				
		Manufacturer	N/A			
		Type				
		MISCELLANEOUS	**DESCRIPTION OF FACILITY**			
		Other Buildings				
		Spare Parts				
		Vac Truck Suitable				
		Does the PS have a Sanitary Overflow? Size and Material? NO				
OVERALL BUILDING AND FACILITY ASSESSMENT						
BUILDING AND ALL OTHER EQUIPMENT IS LESS THAN 10 YEARS OLD AND IN GOOD CONDITION.						

PS-13 - Smith Street PS

Facility Description (see attached Information Sheet)

PS-13 is located at 498 Smith Street, Trainer, PA. The station is a steel prepacked unit and is equipped with (2) 700-GPM, 25 HP Fairbanks Morse centrifugal pumps. Wastewater is discharged through an 8" force main. The pump station was installed in 1997.

The pump wet well is coated steel (750 gal) with 3-foot circular hatchway. The control panel is custom built. The pump system is monitored by an OmniSite Crystal Ball alarm system.

There is no building at this facility.

There is no generator or Automatic Transfer Switch (ATS) at this facility.

The entire property is surrounded by a 30-foot x 33-foot, 8-foot high chain link fence.

Property Condition

Most of the facility is original and in poor condition.

Figure 1 – Pump Site

Figure 2 – Pump Station Entrance

Figure 3 – Pump Station Entrance & Electrical Boxes

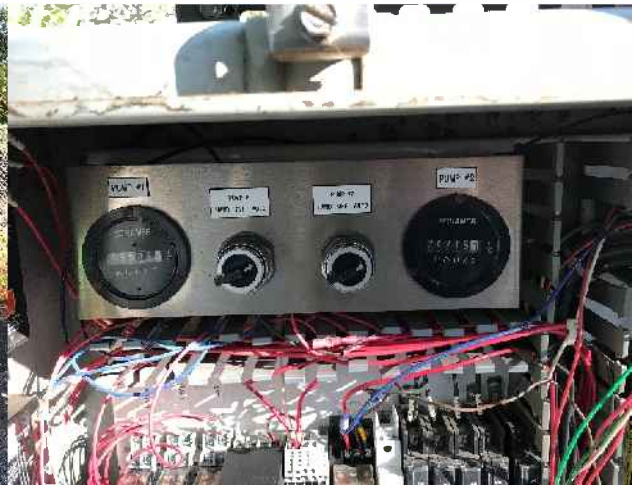


Figure 4 – Pump Controls

Figure 5 – Interior of Dry Pit

Figure 6 - Electric Main

Figure 7 – Electrical Panels

Figure 8 – Omni Site Pump Monitor

PUMP STATION #		PS-13		**Scheduled Visit Date:**	10/22/2019	TUE
Station Name		Smith Street	Phone #			
Location		498 Smith St. Trainer, PA				
Start Up Date		1997				
CODE	**SUBCODE**	**PUMP STATION**				**COMMENTS**
371.3		**PUMP(S)**				
		Condition				
		No. of Pumps	2			
		Type	Centrifugal			
371.3		Pump Manufacturer	Fairbanks Morse			
		Pump Model/Serial Number	T4D30S			
		Year Installed	1997			
		Pump GPM	700			
		Pump TDH Ft.	73 ft			
		Outlet Size	8"			8" By-Pass Hook-up
		Motor HP	25			Marathon 7VJ324TTDR8390ANL
		Motor Voltage	230/460			
371.3		Pump Control (VFD?)	Floats			
370.3		**WET WELL**				
		Condition	Poor			
		Size	750 gal			
		Material	coated steel			
		Lined				
		Hatch	3' circular			
		Vent				
		Rails				
		Cable				
		Piping				
371.3		**CONTROL PANEL**				
		Manufacturer	Custom Built			
		Year Installed				
		Model/Serial number				
361		**INFLUENT PIPING (IF KNOWN)**				
		Material				
		Diameter				
371		**GRINDER**	N/A			
		Manufacturer				
		Model/Serial number				
		HP				
		Year Installed				
371		**CRAIN/HOIST**	N/A			
		Manufacturer				
		Model/Serial number				
		Year Installed				
360		**VALVES (DISCHARGE)**				
		Type	Gate			
		Manufacturer				
		Size	8"			
		#	2			
		Year Installed	1997			
355		**GENERATOR**	N/A			
		Manufacturer				
		Generator KW				
		Generator KVA				
		Fuel Tank (Gals)				
355		ATS (manf/model #)				
		Year Installed				
360		**FORCE MAIN**				
		Force Main Size	8"			
		Force Main Mat.	DI			
		Length in Feet	3,230			
		Year Installed	2007			
		Discharge Point				
		Discharge Point Location				

CODE	SUBCODE	PUMP STATION				COMMENTS
354.2		**BUILDING**	N/A			
		Condition				
		Size				
		Main Structure Material				
		Roof **T**ype				
		Roof Condition				
		Doors (number /material)				
		Lighting (**T**ype)				
		Year Installed				
		ELECTRICAL				
371.3		MCC				
396		Alarm System (manf/ model)	Omni Site Crystal Ball			
		Year Installed				
354.3		**HVAC**	N/A			
		Condition				
		Type				
		Manufacturer				
		Year Installed				
364		Flow Meter				
364		Chart Recorder				
354.3		Hydrants				
		GROUNDS				
354.3		Fence Length	30' x 33' x 8' H			
		Fence **T**ype				
		Year Installed				
354.3		Paving and Walkways				
371.3		**ODOR CONTROL**	N/A			
		Manufacturer				
		Type				
		MISCELLANEOUS	**DESCRIPTION OF FACILITY**			
		Other Buildings				
		Spare Parts				
		Vac **T**ruck Suitable				
		Does the PS have a Sanitary Overflow? Size and Material?				

2007 - **T**rainer FM

OVERALL BUILDING AND FACILITY ASSESSMENT

Most of the pump station components and electronics are original and in poor condition. Pumps were replaced recently.

PS-16 - Broomall Street PS

Facility Description (see attached Information Sheet)

PS-16 is located at 1 Broomall Street, Chester, PA and is equipped with (3) 700-GPM, 20 HP Longo centrifugal dry pit pumps. Wastewater is discharged through an 8-inch DIP force main. The original pump station was installed in 1964.

The pump wet well is poured concrete. The control panel is manufactured by Eurotherm and Chessell, the pumps are controlled by two Yaskawa P1000 VFDs. The system is monitored by a GE Quickpanel. There are three (3) 6-inch (suction) pinch valves, three (3) 6-inch Kennedy vertical swing check valves, (1) knife gate valves, three (3) 6-inch and one (1) 8-inch CLOW gate valves, installed in 1964. Flow is monitored by Krohne magmeter.

The building (24 feet x24 feet) is constructed of brick masonry with some minor issues above door to wet well and flat roof. The building contains in-ceiling fluorescent lighting that looks newer than original lighting, one (1) double door and (1) single door (both steel) into building and control room door.

The entire property is surrounded by a 50' x 50' cyclone fence.

Property Condition

The exterior of the building is in good condition, upper floor is in good condition, lower level steel and pump show considerable deterioration.

Figure 1 – Pump Station Building Front

Figure 2 – Pump Station Building Rear

Figure 3 – Crack in Wall

Figure 4 – Building Interior

Figure 5 – Pump Controls & Electrical Panel

Figure 6 – Flow Meter

Figure 7 – Pumps in Dry Pit

Figure 8 – Pumps & Pipe Manifold

Figure 9 – Pump Gate Valves

Figure 10 – Corroded Pipe Supports

Figure 11 – Corroded Pump Housing

Figure 12 – Corroded Stairs

PUMP STATION #		PS-16		**Scheduled Visit Date:**	10/22/2019	TUE
Station Name		Broomall Street	Phone #			
Location		1 Broomall St. Chester, PA				
Start Up Date		1965				
CODE	**SUBCODE**	**PUMP STATION**				**COMMENTS**
371.3		**PUMP(S)**				
		Condition	(2) not original, (1) new (fair cond.)			
		No. of Pumps	3			
		Type	centrifugal dry pit			
371.3		Pump Manufacturer	LONGO			
		Pump Model Number				
		Year Installed	1964, 1975, 2017			
		Pump GPM	700			
		Pump TDH Ft.	62			
		Outlet Size	4"			
		Motor HP	20			
		Motor Voltage	460			
371.3		Pump Control (VFD?)	(2) Yaskawa P1000			continuous level sensor activated, pumps on VFDs
370.3		**WET WELL**				
		Condition	good			
		Size				
		Material	poured concrete			
		Lined				
		Hatch				
		Vent				
		Rails				
		Cable				
		Piping	ductile iron			
371.3		**CONTROL PANEL**				
		Manufacturer	Eurotherm, Chessell			older pumps on Eurotherm, new pump on Chessell
		Year Installed				
		Model				
361		**INFLUENT PIPING (IF KNOWN)**				
		Material				
		Diameter				
371		**COMMINUTOR**	N/A			
		Manufacturer				
		Model				
		HP				
		Year Installed				
371		**CRAIN/HOIST**	N/A			
		Manufacturer				
		Model				
		Year Installed				
360		**VALVES (DISCHARGE)**				
		Type	pinch	vertical swing check	gate	knife gate
		Manufacturer		Kennedy	CLOW	
		Size	6" suction	6"	6", 8"	
		#	3	January 3, 1900	(3) 6", (1) 8"	1
		Year Installed				
355		**GENERATOR**	N/A			
		Manufacturer				
		Generator KW				
		Generator KVA				
		Fuel Tank (Gals)				
355		ATS (manf/model #)				
		Year Installed				
360		**FORCE MAIN**				
		Force Main Size	8"			
		Force Main Mat.	CIP			
		Length in Feet	760			
		Year Installed	1964			
		Discharge Point				
		Discharge Point Location				

CODE	SUBCODE	PUMP STATION				COMMENTS
354.2		**BUILDING**				
		Condition	good			
		Size	24'x24'			
		Main Structure Material	brick masonry with some minor issus above door to wet well			
		Roof Type	flat			
		Roof Condition				
		Doors (number /material)	(1) double door and (1) single door, both steel, into building and control room			
		Lighting (Type)	Fluorescent lighting in ceiling, looks newer than origianl			
		Year Installed				
		ELECTRICAL				
371.3		MCC	GE			
396		Alarm System (manf/ model)	SCADA based			
		Year Installed				
354.3		**HVAC**				
		Condition				
		Type				
		Manufacturer				
		Year Installed				
364		Flow Meter	Krohne Magmeter			
364		Chart Recorder	scada			
354.3		Hydrants				
		GROUNDS				
354.3		Fence Length				
		Fence Type				
		Year Installed				
354.3		Paving and Walkways				
371.3		**ODOR CONTROL**				
		Manufacturer				
		Type				
		MISCELLANEOUS	**DESCRIPTION OF FACILITY**			
		Other Buildings				
		Spare Parts				
		Vac Truck Suitable				
		Does the PS have a Sanitary Overflow? Size and Material?				
		EVONIK Industries discharges heavy flow into this PS which is severely deteriorating everything on the dry well and wet well.				
OVERALL BUILDING AND FACILITY ASSESSMENT						
Exterior of building is in good condition, upper floor is in good condition, lower level steel and pump show considerable deteroration. New discharge piping installed in 2017.						

PS-22 - Delaware Avenue Ejector. PS

Facility Description (see attached Information Sheet)

PS-22 is located at Market Street and Delaware Avenue, Marcus Hook, PA and is equipped with (2) air ejector pumps, flow rate is undetermined. Wastewater is discharged through 4-inch force main. The pump station was installed in 1979. The air ejectors are powered by two 2 HP Gast Compressors.

The pump wet well is concrete (8-foot diameter). The control panel is manufactured by Flo-A-Matic. There are one (1) 4-inch Milliken plug valve and one (1) 4-inch check valve, installed in 1979.

There is no building at this facility.

There is no generator or Automatic Transfer Switch (ATS) at this facility.

The entire property is surrounded by a 12.5-foot x 12.5-foot, 8-foot high fiberglass enclosure fence.

Property Condition

The facility is in poor condition.

Figure 1 – Pump Station Entrance

Figure 2 – Omni Site Pump Monitor

Figure 3 – Compressor Controls

Figure 4 – Compressors

Figure 5 – Discharge Piping

Figure 6 - Air Tank

PUMP STATION #		PS-22		**Scheduled Visit Date:**	10/23/2019	WED
Station Name		Delaware Avenue Ejector Sta.	Phone #			
Location		Market Street and Delaware Avenue, Marcus Hook, PA				
Start Up Date		1965				
CODE	**SUBCODE**	**PUMP STATION**				**COMMENTS**
371.3		**PUMP(S)**				
		Condition	Poor			
		No. of Pumps	2			
		Type	Air Ejector			
371.3		Pump Manufacturer	Flo-A-Matic			
		Pump Model Number				
		Year Installed	1979			
		Pump GPM				
		Pump TDH Ft.				
		Outlet Size	4"			
		Motor HP	2 HP			Gast Compressors (2)
		Motor Voltage				
371.3		Pump Control (VFD?)	Floats			
370.3		**WET WELL**				
		Condition	poor			
		Size	8' Dia.			Drywell 8' Dia. x 8' High
		Material	concrete			
		Lined				
		Hatch				
		Vent				
		Rails				
		Cable				
		Piping				
371.3		**CONTROL PANEL**				
		Manufacturer	Flo-A-Matic			
		Year Installed	1979			
		Model/Serial number	ELD-103-7B			
361		**INFLUENT PIPING (IF KNOWN**	N/A			
		Material				
		Diameter				
371		**GRINDER**	N/A			
		Manufacturer				
		Model/Serial number				
		HP				
		Year Installed				
371		**CRAIN/HOIST**	N/A			
		Manufacturer				
		Model/Serial number				
		Year Installed				
360		**VALVES (DISCHARGE)**				
		Type	Plug	check		
		Manufacturer	Milliken			
		Size	4"	4"		
		#	1	1		
		Year Installed				
355		**GENERATOR**	N/A			
		Manufacturer				
		Generator KW				
		Generator KVA				
		Fuel Tank (Gals)				
355		ATS (manf/model #)				
		Year Installed				
360		**FORCE MAIN**				
		Force Main Size	4"			
		Force Main Mat.	CIP			
		Length in Feet	345			
		Year Installed	1970			
		Discharge Point				
		Discharge Point Location				

CODE	SUBCODE	PUMP STATION				COMMENTS
354.2		**BUILDING**	N/A			
		Condition				
		Size				
		Main Structure Material				
		Roof Type				
		Roof Condition				
		Doors (number /material)				
		Lighting (Type)				
		Year Installed				
		ELECTRICAL				
371.3		MCC	Breaker Panel			
396		Alarm System (manf/ model)	Omni Site Crystal Ball			
		Year Installed				
354.3		**HVAC**				
		Condition				
		Type	Exhaust fan			
		Manufacturer				
		Year Installed				
364		Flow Meter	N/A			
364		Chart Recorder				
354.3		Hydrants				
		GROUNDS				
354.3		Fence Length	12.5' x 12.5' x 8' H			
		Fence Type	Fiberglass Enclosure			
		Year Installed				
354.3		Paving and Walkways				
371.3		**ODOR CONTROL**	N/A			
		Manufacturer				
		Type				
		MISCELLANEOUS	**DESCRIPTION OF FACILITY**			
		Other Buildings				
		Spare Parts				
		Vac Truck Suitable				
		Does the PS have a Sanitary Overflow? Size and Material? NO				
OVERALL BUILDING AND FACILITY ASSESSMENT						
Most of the equipment is original to the facility and in poor condition. Enclosure was recently installed and is in good						

PS-23 - Viscose Village PS

Facility Description (see attached Information Sheet)

PS-23 is located at 6 Walnut Street, Marcus Hook, PA and is equipped with two (2) 320-GPM, one (1) 280-GPM, 15 HP Vaughan centrifugal vertical shaft, dry pit pumps. Wastewater is discharged through a 12-inch force main. The pump station was originally constructed in 1966. The 2 of Vaughan pumps were replaced in 2008 and 2010. The pumps are controlled GE PLC interactive control screen and Yaskawa P7 VFDs. The pump station controls, piping and other electronics were upgraded in 2013.

The pump wet well is poured concrete (17-foot x 8 inches) with an aluminum hatchway. The control panel is manufactured by TLC Controls. The influent line to the wet well contains a Muffin Monster grinder which operates via a 5 HP unit.

The building (20-foot x 20-foot) is constructed of brick with poured concrete dry pit and flat roof in unknown condition. The building contains fluorescent lighting.

The generator is a Cummins Power 80 KW unit with 235-gallon tank. The Automatic Transfer Switch (ATS) is manufactured by Cummins, Power Command.

The entire property is surrounded by an approximately 70’ x 100’ x 6’ high cyclone fence.

Property Condition

Building exterior is in good condition. Building interior and equipment were upgraded in 2013 and are in good condition.

Figure 1 – Site Entrance

Figure 2 – Building Front

Figure 3 – Electric AC Main, ATS & Grinder Hydraulic Unit

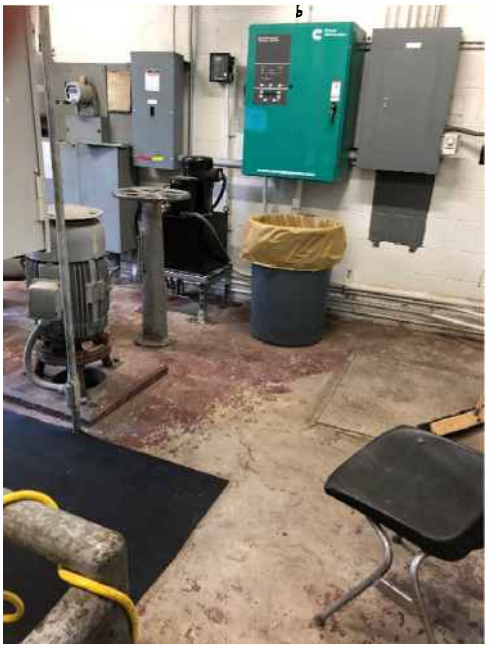


Figure 4 – Pump Motor and Various Electric Panels

Figure 5 – Influent Wet Well

Figure 6 – Dry Pit Dumps

Figure 7 – Pump & gate Valve

Figure 8 – Pump & Gate Valve

PUMP STATION #		PS-23		**Scheduled Visit Date:**	10/22/2019	TUE
Station Name		Viscose Village	Phone #			
Location		6 Walnut St. Marcus Hook, PA				
Start Up Date		1965				
CODE	**SUBCODE**	**PUMP STATION**				**COMMENTS**
371.3		**PUMP(S)**				
		Condition				
		No. of Pumps	3			
		Type	centrifugal vert. shaft, dry pit			
371.3		Pump Manufacturer	(2) Vaughen, (1) Chicago			
		Pump Model Number				
		Year Installed	2010, 2008, 1966			
		Pump GPM	(2) 320, (1) 280			
		Pump TDH Ft.				
		Outlet Size	8"			
		Motor HP	15			Oringinal 1965, rebuilt 2005, two Baldor & one TECO
		Motor Voltage	3 phase 240v			
371.3		Pump Control (VFD?)	Yaskawa, P7BBA042 & P7BBA043			2010, float backup
370.3		**WET WELL**				
		Condition	good			
		Size	17' x 8'			
		Material	Poured Concrete			
		Lined				
		Hatch				
		Vent	2-12" exhaust fans			
		Rails				
		Cable				
		Piping				
371.3		**CONTROL PANEL**				
		Manufacturer	TLC Controls			
		Year Installed	2010			
		Model/Serial number	VST2			
361		**INFLUENT PIPING (IF KNOWN)**				
		Material				
		Diameter				
371		**COMMINUTOR**				
		Manufacturer	Muffin Monster			
		Model/Serial number	Hydraulic			
		HP	5			
		Year Installed				
371		**CRAIN/HOIST**				
		Manufacturer				
		Model/Serial number				
		Year Installed				
360		**VALVES**				
		Type				
		Manufacturer				
		Size				
		#				
		Year Installed				
355		**GENERATOR**				
		Manufacturer	Cummins Power			
		Generator KW	80			
		Generator KVA	100			
		Fuel Tank (Gals)	235			
355		ATS (manf/model #)	Cummins PowerCommand			
		Year Installed	July 2, 1905			
360		**FORCE MAIN**				
		Force Main Size	12"			
		Force Main Mat.	CIP			
		Length in Feet	855			
		Year Installed	1965			
		Discharge Point				
		Discharge Point Location				

CODE	SUBCODE	PUMP STATION				COMMENTS
354.2		**BUILDING**				
		Condition	good			
		Size	20' x 20'			
		Main Structure Material	Brick w/ poured concrete dry pit			
		Roof Type	flat			
		Roof Condition	unknown			
		Doors (number /material)				
		Lighting (Type)	flourecent			
		Year Installed	1965			
		ELECTRICAL				
371.3		MCC	Square D - 225 AMP			
396		Alarm System (manf/ model)	Omni Crystal Ball			
		Year Installed				
354.3		**HVAC**				
		Type	exhaust fans			
		Manufacturer				
		Model				
		Year Installed				
364		Flow Meter	Krohne Magmeter			
364		Chart Recorder				
354.3		Hydrants				
		GROUNDS				
354.3		Fence Length				
		Fence Type				
		Year Installed				
354.3		Paving and Walkways				
371.3		**ODOR CONTROL**				
		Manufacturer				
		Type				
		MISCELLANEOUS	**DESCRIPTION OF FACILITY**			
		Other Buildings				
		Spare Parts				
		Vac Truck Suitable				
		Does the PS have a Sanitary Overflow? Size and Material?				
OVERALL BUILDING AND FACILITY ASSESSMENT						
2013 - PS Upgrades						
Buliding exterior is in good condition, interior and equipment were all approx. 6 years old and are all in good condition						

PS-24 - Stadium (aka Riverfront) PS

Facility Description (see attached Information Sheet)

PS-24 is located at 2501 Seaport Drive, Chester, PA and is equipped with (3) 610-GPM, 10 HP Flygt Submersible pumps. Wastewater is discharged through a 10-inch force main. The pump station was installed in 2010.

The pump wet well is (12-foot x 22-foot). The control panel is a GE Quick Panel, the pumps are controlled by Seimens VFDs. There are three (3) 10-inch swing check valves, three (3) 10-inch gate valves, and one (1) 8-inch surge valves, installed in 2010. The influent line to the wet well contains a Huber Rotomat screen unit. The system has a carbon filter odor control unit. The facility vacuums air out of the wet well and pumps through carbon filter.

The building (12-foot x 15-foot) is constructed of precast concrete exterior formed to look like brick. Precast concrete walls, concrete slab. and hip roof, standing seam-metal roof in good condition. The building contains two (2) 4-foot fluorescent on ceiling lighting and one (1) metal double door.

The Generator is a Cummings 80 KW unit with a 200-gallon diesel tank. The Automatic Transfer Switch (ATS) is manufactured by Entelli-switch 250.

The entire property is surrounded by a 200-foot, 7-foot high vinyl coated chain link fence with barbed wire.

Property Condition

The building, pumps and controls are all in good condition.

Figure 1 – Site Entrance

Figure 2 – Odor Controls

Figure 3 – MCC

Figure 4 – Pump Controls

Figure 5 - Generator

Figure 6 - Pump Wet Well & Valve Pit

Figure 7 – Pump Wet Well

Figure 8 – Check & Gate Valves

PUMP STATION #		PS-24		**Scheduled Visit Date:**	10/22/2019	TUE
Station Name		Stadium (aka Riverfront)	Phone #			
Location		2501 Seaport Dr. Chester, PA				
Start Up Date		1965				
CODE	**SUBCODE**	**PUMP STATION**				**COMMENTS**
371.3		**PUMP(S)**				
		Condition				
		No. of Pumps	3			
		Type	Submersible			
371.3		Pump Manufacturer	Flygt			
		Pump Model Number	3127			
		Year Installed	2010			
		Pump GPM	610			Pumps 2 & 3 together 1050gpm
		Pump TDH Ft.	21			
		Outlet Size	10"			
		Motor HP	10			
		Motor Voltage	480			
371.3		Pump Control (VFD?)	Siemens touchscreen			discrete level controls with VFDs
370.3		**WET WELL**				
		Condition				
		Size	12' x 22' out to out			
		Material				
		Lined				
		Hatch				
		Vent	ss			
		Rails				
		Cable				
		Piping				
371.3		**CONTROL PANEL**				VFD 1-3
		Manufacturer	GE			
		Year Installed				
		Model	Quick Panel			
361		**INFLUENT PIPING (IF KNOWN)**				
		Material				
		Diameter				
371		**VERTICAL FINE SCREEN**				Influent Screen
		Manufacturer	Huber			
		Model	Rotamat			
		HP				
		Year Installed				
371		**CRAIN/HOIST**	N/A			
		Manufacturer				
		Model				
		Year Installed				
360		**VALVES (DISCHARGE)**				
		Type	Swing Check	Gate	Surge	
		Manufacturer				
		Size	10"	10"	8"	
		#	3	3	1	
		Year Installed				
355		**GENERATOR**				
		Manufacturer	Cummings			
		Generator KW	80			
		Generator KVA	100			
		Fuel Tank (Gals)	200gal diesel			
355		ATS (manf/model #)	Entelli-switch 250			
		Year Installed	looks new			
360		**FORCE MAIN**				
		Force Main Size	10"			
		Force Main Mat.	DI			
		Length in Feet	4,650			
		Year Installed	2010			
		Discharge Point				
		Discharge Point Location				

CODE	SUBCODE	PUMP STATION				COMMENTS
354.2		**BUILDING**				
		Condition	good			
		Size	12' x 15'			
		Main Structure Material	precast concrete building exterior formed to looks like brick. Precast concrete walls, concrete slab.			
		Roof Type	hip roof, standing seam-metal			
		Roof Condition	good			
		Doors (number /material)	(1) metal double door			
		Lighting (Type)	(2) 4' Fluorescent on ceiling			
		Year Installed	new			
		ELECTRICAL				
371.3		MCC	GE Evolution Series E9000, 480V			
396		Alarm System (manf/ model)	OmniSite Crystal Ball			
		Year Installed				
354.3		**HVAC**				
		Condition				
		Type	Electric Heater			
		Manufacturer	Qmark			
		Year Installed	White-Rodgers			
364		Flow Meter	KROHNE			located inside 6' x 6" valve vault
364		Chart Recorder	N/A			
354.3		Hydrants	N/A			
		GROUNDS				
354.3		Fence Length	200LF, 7'H with 1' barbed wire			
		Fence Type	chain link fence winyl coated			
		Year Installed	new			
354.3		Paving and Walkways	good			
371.3		**ODOR CONTROL**	Yes			
		Manufacturer				
		Type	vacuums air out of wet well and pumps through carbon filter			
		MISCELLANEOUS	**DESCRIPTION OF FACILITY**			
		Other Buildings				
		Spare Parts				
		Vac Truck Suitable				
		Does the PS have a Sanitary Overflow? Size and Material?				
Large valve vault: 13'-10" x 11'-3" out to out with swing checks, gates, and surge						
Flow meter valve vault: 6' x 6' out to out. Flow meter with pressure gauge.						
OVERALL BUILDING AND FACILITY ASSESSMENT						
Building, pumps, electrical controls and all other components are in good condition.						

PS-26 - Longpoint Lane Ejector Sta. PS

Facility Description (see attached Information Sheet)

PS-26 is located at 8 N. Longpoint Ln, Rose Valley, PA and is equipped with air ejector pumps. Flow rate is undetermined. Wastewater is discharged through a 6-in PVC force main. The pump station was installed in approx. 1970. An Ingersol Rand compressor powers the air ejector system.

The pump wet well is below the floor, two (2) steel (approximately 3 feet in diameter and 3 feet deep) pressurized tanks are located in the dry pit. The control panel is custom made. There are two (2) 3-inch gate valves.

The building (10-foot x 15-foot) is constructed of red brick masonry exterior, unfinished exposed studs, rafters, and masonry interior and an asphalt shingle roof in newer condition. The building contains overhead fluorescent lighting and 1 wood double door.

The is no generator or Automatic Transfer Switch (ATS).

The property is not fenced and the facility does not utilize an odor control system.

Property Condition

The building is in good condition, the roof is in newer condition. Pumps and other controls are in good condition.

Figure 1 – Small Structure to House Ejector Station (Below)

Figure 2 – Interior of Small Structure

Figure 3 – Compressor Ejector

Figure 4 – Ejector Piping and Tanks

PUMP STATION #		PS-26		Scheduled Visit Date:	10/17/2019	THUR
Station Name		Longpoint Lane Ejector Sta.	Phone #			
Location		8 N. Longpoint Ln, Rose Valley, PA				
Start Up Date		approx. 1970				
CODE	**SUBCODE**	**PUMP STATION**				**COMMENTS**
371.3		**PUMP(S)**				
		Condition	good			
		No. of Pumps				
		Type	air ejector			
371.3		Pump Manufacturer	Ingersoll-Rand			
		Pump Model Number				
		Year Installed	1970			
		Pump GPM				
		Pump TDH Ft.				
		Outlet Size				
		Motor HP				compressor
		Motor Voltage				
371.3		Pump Control (VFD?)	floats			
370.3		**WET WELL**				
		Condition	(2) steel pressurized tanks in dry well			
		Size	appoximately 3' diam and 3'H below grade			
		Material	Steel			condition of steel appears to be adequate
		Lined	no			
		Hatch	no			
		Vent	no			
		Rails	no			
		Cable	no			
		Piping				
371.3		**CONTROL PANEL**				
		Manufacturer	custom			
		Year Installed	1970			
		Model				
361		**INFLUENT PIPING (IF KNOWN)**				
		Material	PVC			Influent and effluent pipes are PVC. All other piping is Ductile Iron or Cast Iron
		Diameter	6"			
371		**GRINDER**	N/A			
		Manufacturer				
		Model				
		HP				
		Year Installed				
371		**CRAIN/HOIST**	N/A			
		Manufacturer				
		Model				
		Year Installed				
360		**VALVES (DISCHARGE)**				
		Type	gate	swing check		
		Manufacturer				
		Size				
		#				
		Year Installed	approx. 1970	approx. 1970		
355		**GENERATOR**	N/A			
		Manufacturer				
		Generator KW				
		Generator KVA				
		Fuel Tank (Gals)				
355		ATS (manf/model #)	N/A			
		Year Installed				
360		**FORCE MAIN**				
		Force Main Size	6"			
		Force Main Mat.	CIP			
		Length in Feet	848			
		Year Installed	1956			
		Discharge Point				
		Discharge Point Location				

354.2		**BUILDING**				
		Condition	good			
		Size	10'x15'			
		Main Structure Material	red brick masonry exterior, unfinished exposed studs, rafters, and masonry interior			
		Roof Type	ridge, arch. Shingles			
		Roof Condition	newer			not full height
		Doors (number /material)	1 wood double door			
		Lighting (Type)	overhead fluorescent lights			
		Year Installed	approx. 1970			
		ELECTRICAL				
371.3		MCC	Westinghouse			underground service, 240V
396		Alarm System (manf/ model)	Omni Crystal Ball			
		Year Installed				
354.3		**HVAC**	N/A			
		Condition				
		Type				
		Manufacturer				
		Year Installed				
364		Flow Meter				Effluent
364		Chart Recorder				
354.3		Hydrants				
		GROUNDS	N/A			
354.3		Fence Length				
		Fence Type				
		Year Installed				
354.3		Paving and Walkways	good condition			
371.3		**ODOR CONTROL**				
		Manufacturer				
		Type				
		MISCELLANEOUS	**DESCRIPTION OF FACILITY**			
		Other Buildings				
		Spare Parts				
		Vac Truck Suitable				
		Does the PS have a Sanitary Overflow? Size and Material?				
OVERALL BUILDING AND FACILITY ASSESSMENT						
2017 - Rose Valley PS & FM						

PS-27 - AKA Chester-Ridley Creek PS

Facility Description (see attached Information Sheet)

PS-27 is submersible pump station located at 1 Gamble Lane, Aston, PA and was installed in 2014. The station has four (4) 3,850-GPM submersible pumps. The pump station is in good condition.

The influent is screened with two Huber upright bar screens. The station has a gravity grit pit. Two self-priming pumps pump the grit to a grit classifier. The grit chamber overflows directly into the wet well. The pump wet well is unlined concrete.

The pumps have 250 HP 460-volt motors, which are VFD controlled. The PLC based control panel was manufactured by Trijay. The station has a magnetic flow meter. SCADA communications are redundant with directional radio and internet cable. The flow meter is in a separate concrete vault.

The Generator is an MTU - Onsite Energy 600 KW KW unit with a 3000-gallon tank. The Automatic Transfer Switch (ATS) is a 1600A ASCO/ G03AUSA31600NGXM. The pump VFD's are as manufactured by DRV. The station's MCC was manufactured by General Electric \

The building (2,500 Sq. Ft.) is constructed of Brick/ CMU with EPIS stucco. The membrane roof is in good condition. The wet well, screens, and grit classifier are located within the same building space. This building space has explosion proof electrical construction. There is a separate electrical room. The screen area/ wet well / pump room and the electrical room are well separated. The building contains LED lighting. The doors are painted carbon steel. The ventilation systems are a ducted forced air system is in good condition. The pump room has an overhead trolley hoist.

The pump station sits within a larger property, which is surrounded by a 3,100-foot galvanized steel chain link fence. The access drive is in good condition. The paved area around the station is in fair condition.

Property Condition

Due to the age of the facility, the building, equipment and electronics are in good condition.

Figure 1 – Bar Screen Discharge

Figure 2 – Electrical Panels

Figure 3 – MCC

Figure 4 – Gas Detector Panel

Figure 5 - VFD

Figure 6 - VFD / Pump Control

Figure 7 – SCADA / Pump Monitor Display

Figure 8 – Pump Controls

Figure 9 – Ultrasonic Flowmeter

Figure 10 - Pump Station Building

Figure 11 – Control Room

Figure 12 – Bar Screens

Figure 13 - Grit Classifier

Figure 14 – Grit Pumps

PUMP STATION #		PS-27		Scheduled Visit Date:	10/25/2019 FRI		
Station Name		Chester-Ridley Creek	Phone #				
Location		1 Gamble Ln. Aston, PA					
Start Up Date		2014					
CODE	**SUBCODE**	**PUMP STATION**				**COMMENTS**	
371.3		**PUMP(S)**					
		Condition	New				
		No. of Pumps	4				
		Type	Submersible				
371.3		Pump Manufacturer	Flygt				
		Pump Model Number	3237/746-5001				
		Year Installed	2014				
		Pump GPM	3850				
		Pump TDH Ft.	149				
		Outlet Size	???				
		Motor HP	250 HP				
		Motor Voltage	460 V				
371.3		Pump Control (VFD?)	VFD				
370.3		**WET WELL**					
		Condition	Good				
		Size					
		Material	Concrete				
		Lined	No				
		Hatch	N/A				
		Vent	N/A				
		Rails	Stainless Steel				
		Cable	Yes				
		Piping	Ductile Iron				
371.3		**CONTROL PANEL**					
		Manufacturer	Trijay/ General Electric				
		Year Installed	2014				
		Model	Presume GE 90-70				
361		**INFLUENT PIPING (IF KNOWN)**					
		Material					
		Diameter					
371		**SCREEN**					
		Manufacturer	Huber			2 Screens	
		Model	ROTAMAT				
		HP					
		Year Installed	2014				
371		**CRANE/HOIST**					
		Manufacturer	McDal				
		Model	3 Ton				
		Year Installed	2014				
360		**VALVES (DISCHARGE)**					
		Type	Plug				
		Manufacturer					
		Size					
		#	4				
		Year Installed	2014				
355		**GENERATOR**					
		Manufacturer	MTU - Onsite Energy				
		Generator KW	600 KW				
		Generator KVA	750 KVA				
		Fuel Tank (Gals)	3000 Gal				
355		ATS (manf/model #)	1600A ASCO/ G03AUSA31600NGXM				
		Year Installed	2014				
360		**FORCE MAIN**					
		Force Main Size	30"	30"			
		Force Main Mat.	DI	HDPE			
		Length in Feet	10,410	4,770			
		Year Installed	2013	2013			
		Discharge Point					
		Discharge Point Location					

CODE	SUBCODE	PUMP STATION				COMMENTS	
354.2		**BUILDING**					
		Condition	Good				
		Size	2,508 Sq. Ft.				
		Main Structure Material	CMU				
		Roof Type	Membrane				
		Roof Condition	New				
		Doors (number /material)	5/ Steel				
		Lighting (Type)	LED				
		Year Installed	2014				
		ELECTRICAL					
371.3		MCC	GE 1600A Distribution Switchboard				
396		Alarm System (manf/ model)	APC SCADA Based & Edwards Fire / Security Panel				
		Year Installed					
354.3		**HVAC**					
		Condition	Good				
		Type	Mechanical Cooling - Centrifugal Fan/ Air Duct				
		Manufacturer					
		Year Installed	2014				
364		Flow Meter	Endress Hauser Mag Meter				
364		Chart Recorder	SCADA				
354.3		Hydrants	N/A				
		GROUNDS					
354.3		Fence Length	3076'				
		Fence Type	Galvanized Steel Chain Link				
		Year Installed	2014				
354.3		Paving and Walkways	Asphalt				
371.3		**ODOR CONTROL**					
		Manufacturer	N/A				
		Type	N/A				
		MISCELLANEOUS	**DESCRIPTION OF FACILITY**				
		Other Buildings					
		Spare Parts					
		Vac Truck Suitable					
		Does the PS have a Sanitary Overflow? Size and Material?					
2002 - Forcemain Construction Chester Creek Crossing							
2013 - CRC FM							
2013 - CRC PS							
2018 - Electrical Systems Upgrades							
OVERALL BUILDING AND FACILITY ASSESSMENT							
Facility was constructed in 2014. All facility components are in good condition.							

PS-28 - Bridle Way (EPS-1) PS

Facility Description (see attached Information Sheet)

PS-28 is located at 20 Bridle Way, Newtown Square, PA and is equipped with two (2) duty pt. 562-GPM, 60 HP Flygt submersible pumps. Wastewater is discharged through a 6-inch DIP force main. The pump station was installed in 2016.

The pump wet well is precast concrete with no coating (10-foot diameter) with three (3) new aluminum hatches. The pump control panel is a GE PLC touch screen, pumps are controlled by Yaskawa P1000 VFDs. The pump system has a separate 4-foot Bar Screen. There are one (1) 4-inch gate valves, three (3) 6-inch Milliken plug valves, one (1) 4-inch check valve, two (2) 6-inch GA Industries air cushioned swing check valves, one (1) 4-inch GA Industries surge valves, installed in 2016. The influent line to the wet well contains a 5 HP electric operated muffin monster grinder.

The building (22-foot x 22-foot) is constructed of stone masonry veneer exterior with 12-inch thick CMU interior and asphalt shingle roof in new condition. The building contains fluorescent lighting in ceiling and a double, insulated metal door and frame door.

The facility is powered by 200 amp service panel. The Generator is a KOHLER 100 KW unit with diesel tank. The Automatic Transfer Switch (ATS) is manufactured by ASCO 200A, Service Entrance Transfer Switch, Emerson. A 150 KVA transformer is located on the side of the building.

The entire property is surrounded by a 200-foot long, 6-foot high ornamental aluminum fence, with vehicle and main gates.

Property Condition

The building, pumps and electrical controls were all installed in 2016 and are in good condition.

Figure 1 – Pump Station Building

Figure 2 – Generator

Figure 3 – Top Slab of Wet Well

Figure 4 – Interior of Building (Elect. & Control Area)

Figure 5 – – Interior of Building (Elect. & Control Area)

Figure 6 – Discharge Pipe Layout

Figure 7 – Discharge Pipe Layout

Figure 8 – Wet Well

PUMP STATION #		PS-28		**Scheduled Visit Date:**	10/17/2019	THUR	
Station Name		Bridle Way (EPS-1)	Phone #				
Location		20 Bridle Way, Newtown Square, PA					
Start Up Date		2016					
CODE	**SUBCODE**	**PUMP STATION**				**COMMENTS**	
371.3		**PUMP(S)**					
		Condition	new				
		No. of Pumps	2				
		Type	Submersible				
371.3		Pump Manufacturer	Flygt (Xylem)			S/N 1510016/1510017	
		Pump Model Number	NP3202.095-5105			Impeller: NP467, 4"	
		Year Installed	2016				
		Pump GPM	duty pt. 562 gpm			reading during site visit 650gpm	
		Pump TDH Ft.	166				
		Outlet Size	4"				
		Motor HP	60				
		Motor Voltage	460V				
371.3		Pump Control (VFD?)	(2) Yaskawa P1000 VFDs			VFD controls with float activated switch	
370.3		**WET WELL**					
		Condition	new				
		Size	10' diameter				
		Concrete	precast concrete with no coating				
		Lined	unlined				
		Hatch	(3) new aluminum hatches				
		Vent	4" DIP (passive)				
		Rails	2" diameter SS 304				
		Cable	SS				
		Piping	DIP				
371.3		**CONTROL PANEL**					
		Manufacturer	GE				
		Year Installed	2016				
		Model	PLC touch screen				
361		**INFLUENT PIPING (IF KNOWN)**					
		Material					
		Diameter					
371		**GRINDER**					
		Manufacturer	muffin monster				
		Model	30005-24				
		HP	5 HP Elec.			motor on top of grinder	
		Year Installed	2016				
371		**CRAIN/HOIST**	N/A				
		Manufacturer					
		Model					
		Year Installed					
360		**VALVES (DISCHARGE)**					
		Type	Gate	Plug	Check	Air Cushioned Swing Check	Surge
		Manufacturer		Milliken		GA Industries	GA Industries
		Size	4"	6"	4"	6"	4"
		#	1	3	1	2	1
		Year Installed	2016	2016	2016	2016	2016
355		**GENERATOR**					
		Manufacturer	KOHLER				
		Generator KW	100				
		Generator KVA	125				
		Fuel Tank (Gals)	diesel				
355		ATS (manf/model #)	ASCO 200A, Service Entrance Transfer Switch, Emerson				
		Year Installed	2016				
360		**FORCE MAIN**					
		Force Main Size	8"				
		Force Main Mat.	FPVC				
		Length in Feet	2,022				
		Year Installed	2014				
		Discharge Point					
		Discharge Point Location					

CODE	SUBCODE	PUMP STATION				COMMENTS	
354.2		**BUILDING**					
		Condition	new				
		Size	22'x22'			out to out	
		Main Structure Material	Stone masonry veneer exterior with 12" THK CMU interior				
		Roof Type	sloped rood ridge line constructed with 2" x with Arch, asphalt shingles				
		Roof Condition	new				
		Doors (number /material)	1 double, insulated metal door and frame				
		Lighting (Type)	fluorescent lights in ceiling				
		Year Installed	2016				
		ELECTRICAL					
371.3		MCC	200 AMP service panel			transformer	
396		Alarm System (manf/ model)	hard wire fire alarm (Honeywell)				
		Year Installed	2016				
354.3		**HVAC**					
		Condition	NEW			in building only	
		Type	unit heaters/exhaust fans				
		Manufacturer					
		Year Installed					
364		Flow Meter	6" KROHNE				
364		Chart Recorder	N/A				
354.3		Hydrants	N/A				
		GROUNDS					
354.3		Fence Length	200LF, 50'x40' with vehicle and main gates				
		Fence Type	6'H ornamental aluminum				
		Year Installed	2016				
354.3		Paving and Walkways	well maintained				
371.3		**ODOR CONTROL**	N/A				
		Manufacturer					
		Type					
		MISCELLANEOUS	**DESCRIPTION OF FACILITY**				
		Other Buildings	4' Bar Screen				
		Spare Parts	VFDs				
		Vac Truck Suitable					
		Does the PS have a Sanitary Overflow? Size and Material?					
OVERALL BUILDING AND FACILITY ASSESSMENT							
2009 - Pump Upgrade							
2010 - Rag Conveyor System							
(2) insulated flood vent model 1540-520 vy smart vent, at 8" above grade							
"OMNI SITE" not activated							
This facilitty is new, clean, and very well maintained							
1) Bridle Way (EPS-1) and Dream Valley (EPS-3) will forward all communicational data to Runnymeade (EPS-2). Fiber optic cables will be used to transmit this data.							
2) Runnymeade (EPS-2) will send all system data to the WRTP via radio communications.							

PS-29 - Runnymeade (EPS-2) PS

Facility Description (see attached Information Sheet)

PS-29 is located at 3547 Runnymeade Dr. Newtown Square, PA and is equipped with two (2) 856-GPM, 105 HP Flygt submersible pumps. Wastewater is discharged through a 6-inch DIP force main. The pump station was installed in 2016.

The pump wet well is concrete, coated (approx. 10-foot x 15-foot x 18-foot deep) with three (3) aluminum hatchways, two (2) 5-foot x 3-foot and one (1) 2-foot x 2-foot. The pump control panel is manufactured by GE. Pumps are operated with 2 Yaskawa P1000 VFDs. There is one (1) 4-inch gate valve, two (2) 8-inch Milliken plug valves, one (1) 8-inch GA Industries surge valve, two (2) 8-inch and one (1) 4-inch GA Industries air cushion check valves, installed in 2016. The influent line to the wet well contains a muffin monster grinder which operated via a 5 HP electric unit. Flow is monitored by a Krohne magmeter.

The building (22-foot x 22-foot) is constructed of stone masonry veneer exterior with 12-inch CMU interior and sloped roof ridge line constructed with an asphalt shingle roof in new condition. The building contains fluorescent lighting and a double, insulated metal door and frame door and a bathroom, sink, and toilet.

System power is supplied by a 400 amp service panel. The Generator is a KOHLER 250 KW unit with diesel tank. The Automatic Transfer Switch (ATS) is manufactured by ASCO 400A Emerson.

The entire property is surrounded by a 170-linear-foot, 6-foot high ornamental aluminum fence with vehicle and main gates.

Property Condition

The pumps, equipment, and building are all in new condition

Figure 1 – Pump Station Building

Figure 2 – Top Slab of Wet Well

Figure 3 – Generator

Figure 4 – Interior of Building (Elect. & Control Area)

Figure 5 – Interior of Building (Elect. & Control Area)

Figure 6 – Discharge Pipe Layout

Figure 7 – Discharge Pipe Layout

Figure 8 – Grinder in Wet Well

PUMP STATION #		PS-29		**Scheduled Visit Date:**	10/17/2019	THUR
Station Name		Runnymeade (EPS-2)	Phone #			
Location		3547 Runnymeade Dr. Newtown Square, PA				
Start Up Date		2016				
CODE	**SUBCODE**	**PUMP STATION**				**COMMENTS**
371.3		**PUMP(S)**				
		Condition	new			
		No. of Pumps	2			
		Type	Submersible			
371.3		Pump Manufacturer	Flygt (Xylem)			S/N 1510007/1510008
		Pump Model Number	NP-3301.090-5236			Impeller NP460 6"
		Year Installed	2016			
		Pump GPM	856			
		Pump TDH Ft.	244			
		Outlet Size	6"			
		Motor HP	105			
		Motor Voltage	460			
371.3		Pump Control (VFD?)	(2) Yaskawa P1000 VFDs			VFD controls with float activated switch
370.3		**WET WELL**				
		Condition	new			
		Size	approx. 10'x15'x18'D			
		Concrete	concrete, coated			
		Lined	unlined			
		Hatch	(3) aluminum, (2) 5' x 3' and (1) 2' x 2'			
		Vent	8" DIP (passive)			
		Rails	2" diameter SS 304			
		Cable	SS			
		Piping	DIP			
371.3		**CONTROL PANEL**				
		Manufacturer	GE			
		Year Installed	2016			
		Model	PLC touch screen			
361		**INFLUENT PIPING (IF KNOWN)**				
		Material				
		Diameter				
371		**GRINDER**				
		Manufacturer	muffin monster			
		Model	30005-24			
		HP	5 HP Elec.			motor on top of grinder in wet well
		Year Installed	2016			
371		**CRAIN/HOIST**	N/A			
		Manufacturer				
		Model				
		Year Installed				
360		**VALVES (DISCHARGE)**				
		Type	Gate	Plug	Surge	Air Cushion Check
		Manufacturer		Milliken	GA Industries	GA Industries
		Size	4"	8"	8"	4", 8"
		#	1	2	1	(2) 8", (1) 4"
		Year Installed	2016	2016	2016	2016
355		**GENERATOR**				
		Manufacturer	KOHLER			Model 250RE0ZJE
		Generator KW	250			
		Generator KVA	312.5			
		Fuel Tank (Gals)	diesel			
355		ATS (manf/model #)	ASCO 400A Emerson			
		Year Installed	2016			
360		**FORCE MAIN**				
		Force Main Size	10"			
		Force Main Mat.	FPVC			
		Length in Feet	1,860			
		Year Installed	2014			
		Discharge Point				
		Discharge Point Location				

CODE	SUBCODE	PUMP STATION				COMMENTS
354.2		**BUILDING**				
		Condition	new			
		Size	22'x22'			out to out
		Main Structure Material	Stone masonry veneer exterior with 12" THK CMU interior			
		Roof Type	sloped roof ridge line constructed with 2" x with Arch, asphalt shingles			
		Roof Condition	new			
		Doors (number /material)	1 double, insulated metal door and frame			
		Lighting (Type)	fluorescent lights in ceiling			
		Year Installed	2016			
		ELECTRICAL				
371.3		MCC	Service Panel			
396		Alarm System (manf/ model)	hard wire fire alarm (Honeywell)			
		Year Installed	2016			
354.3		**HVAC**				
		Type				
		Manufacturer				
		Model				
		Year Installed				
364		Flow Meter	8" KROHNE			
364		Chart Recorder	N/A			
354.3		Hydrants	N/A			
		GROUNDS				
354.3		Fence Length	170LF, 60'x25' with vehicle and main gates			
		Fence Type	6'H ornamental aluminum			
		Year Installed	2016			
354.3		Paving and Walkways	well maintained			
371.3		**ODOR CONTROL**	N/A			
		Manufacturer				
		Type				
		MISCELLANEOUS	**DESCRIPTION OF FACILITY**			
		Building	building has bathroom with sink and toilet			
		Spare Parts	N/A			
		Vac Truck Suitable	N/A			
		Does the PS have a Sanitary Overflow? Size and Material?				
(2) insulated flood vent model 1540-520 vy smart vent, at 8" above grade						
"OMNI SITE" not activated						
This facilitty is new, clean, and very well maintained						
1) Bridle Way (EPS-1) and Dream Valley (EPS-3) will forward all communicational data to Runnymeade (EPS-2). Fiber optic cables will be used to transmit this data.						
2) Runnymeade (EPS-2) will send all system data to the WRTP via radio communications.						
Lavatory with mop sink						

PS-30 - Dream Valley (EPS-3) PS

Facility Description (see attached Information Sheet)

PS-30 is located at 45 Dream Valley Drive, Newtown Square, PA and is equipped with two (2) 121-GPM, 4 HP Flygt submersible pumps. Wastewater is discharged through a 3-inch DIP force main. The pump station was installed in 2016.

The pump wet well is precast concrete (6-foot diameter) with 4-foot x 3-foot-6-inch aluminum (300 psf) hatchway. There are two (2) 4-inch GA Industries air cushioned swing check valves, three (3) 4-inch Milliken plug valves, installed in 2016. The influent line to the wet well contains a Muffin Monster grinder which operated via a 5 HP electric unit. Flow is monitored by a Krohne magmeter. Pumps are controlled by a GE interactive control screen, VFDs with a SCADA interface.

There is no building at this facility. All equipment is housed in weatherproof enclosers.

The Generator is a Generac 20 KW unit operated with natural gas. The Automatic Transfer Switch (ATS) is manufactured by Generac.

The entire property is surrounded by an 8-foot x 11-foot, 6-foot high ornamental aluminum fence.

Property Condition

The facility is new and in good condition.

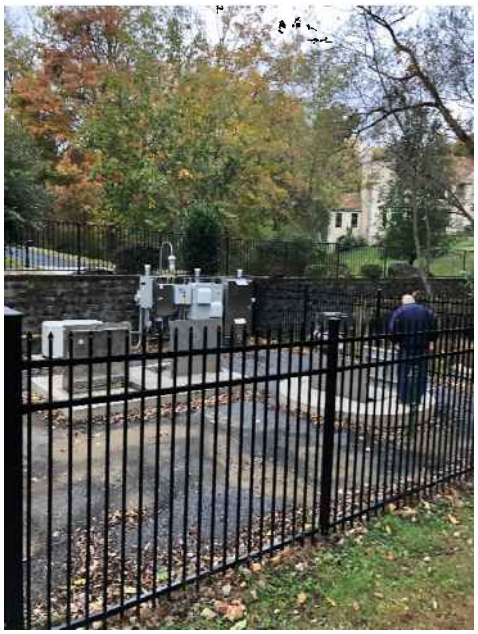


Figure 1 – Pump Station Yard

Figure 2 – Generator

Figure 3 – Valve Vault

Figure 4 – Grinder in Wet Well

PUMP STATION #		PS-30		**Scheduled Visit Date:**	10/17/2019	THUR
Station Name		Dream Valley (EPS-3)	Phone #			
Location		45 Dream Valley Drive, Newtown Square, PA				
Start Up Date		2016				
CODE	**SUBCODE**	**PUMP STATION**				**COMMENTS**
371.3		**PUMP(S)**				
		Condition	new			
		No. of Pumps	2			
		Type	submersible			
371.3		Pump Manufacturer	Flygt (Xylem)			S/N 1510024/1510025
		Pump Model Number	NP-3085.190-0146			Impeller: NP255 3"
		Year Installed	2016			
		Pump GPM	121			
		Pump TDH Ft.	63			
		Outlet Size	3"			
		Motor HP	4			
		Motor Voltage	460			
371.3		Pump Control (VFD?)	VFD controls with float activated switch			
370.3		**WET WELL**				
		Condition	new			
		Size	6' diameter			
		Concrete	precast concrete			
		Lined	lined			
		Hatch	4' x 3'-6" aluminum (300 psf)			
		Vent	4" DIP			
		Rails	2" diameter SS 304			
		Cable	SS			
		Piping	DIP			
371.3		**CONTROL PANEL**				
		Manufacturer	Flygt (Xylem)			
		Year Installed				
		Model				
361		**INFLUENT PIPING (IF KNOWN)**				
		Material	DIP- Class 52			
		Diameter	8"			
371		**GRINDER**				
		Manufacturer	Muffin Monster			
		Model	30005-8			
		HP	5 HP Elec.			motor on top of grinder in wet well
		Year Installed	2016			
371		**CRAIN/HOIST**	N/A			
		Manufacturer				
		Model				
		Year Installed				
360		**VALVES (DISCHARGE)**				
		Type	Air Cushioned Swing Check	Plug		
		Manufacturer	GA Industries	Milliken		
		Size	4"	4"		
		#	2	3		
		Year Installed	2016	2016		
355		**GENERATOR**				
		Manufacturer	Generac			
		Generator KW	20			
		Generator KVA	25			
		Fuel Tank (Gals)	natural gas			
355		ATS (manf/model #)	Generac			
		Year Installed	2016			
360		**FORCE MAIN**				
		Force Main Size	2"			
		Force Main Mat.	fPVC			
		Length in Feet	698			
		Year Installed	2014			
		Discharge Point				
		Discharge Point Location				

CODE	SUBCODE	PUMP STATION				COMMENTS
354.2		**BUILDING**	N/A			
		Condition				
		Size				
		Main Structure Material				
		Roof Type				
		Roof Condition				
		Doors (number /material)				
		Lighting (Type)				
		Year Installed				
		ELECTRICAL				
371.3		MCC	Service Panel			
396		Alarm System (manf/ model)				
		Year Installed				
354.3		**HVAC**	N/A			
		Type				
		Manufacturer				
		Model				
		Year Installed				
364		Flow Meter	approx. 8" Krohne			
364		Chart Recorder				
354.3		Hydrants				
		GROUNDS				
354.3		Fence Length	8'x11'x6'H			
		Fence Type	ornamental aluminum			
		Year Installed	2016			
354.3		Paving and Walkways				
371.3		**ODOR CONTROL**	N/A			
		Manufacturer				
		Type				
		MISCELLANEOUS	**DESCRIPTION OF FACILITY**			
		Other Buildings				
		Spare Parts				
		Vac Truck Suitable				
		Does the PS have a Sanitary Overflow? Size and Material?				

1) Bridle Way (EPS-1) and Dream Valley (EPS-3) will forward all communicational data to Runnymeade (EPS-2). Fiber optic cables will be used to transmit this data.

2) Runnymeade (EPS-2) will send all system data to the WRTP via radio communications.

PS-31 - Rose Valley PS

Facility Description (see attached Information Sheet)

PS-31 is located at 18 S. Longpoint Ln. Rose Valley, PA and is equipped with two (2) 275-GPM, 35 HP Flygt submersible pumps. Wastewater is discharged through a 6-inch force main. The original pump station building was installed in 1937. The pumps and controls were update in 2017.

The pump wet well is precast coated concrete, (7-foot-4 inches x 11-foot-4 inches) with two (2) aluminum, 3-foot x 3-foot and 3-foot x 5-foot hatchways and davit crane. The control panel is manufactured by GE. The pumps are controlled by Yaskawa Z1000 VFDs. There are five (5) plug valves, installed in 2017. The influent line to the wet well contains a Muffin Monster grinder. A Krohne Magmeter measures discharge flow.

The building (approx. 14-foot x 14-foot) is constructed of stone masonry exterior with newly rehabbed sheetrock interior and slate, hip roof in new condition. The building contains fluorescent lighting in the ceiling lighting and one (1) door.

The Generator is a Generac 175 KW unit with 693-gallon diesel tank. The Automatic Transfer Switch (ATS) is manufactured by Generac GTS-Series. There is a150 KVA transformer located adjacent to the pump station

The entire property is surrounded by a 6-foot high chain link fence.

Property Condition

The building exterior and interior are in good condition, the roof is in new condition. Since the station was upgraded in 2017, all equipment is in good condition.

Figure 1 – Front Door Elevation of Control Building

Figure 2 – Back Corner Elevation of Control Building

Figure 3 – Interior of Control Building

Figure 4 – Interior of Control Building

Figure 5 – Top Slab of Wet Well

Figure 6 – Grinder in Wet Well

Figure 7 –Valve Vault

Figure 8 – Elect. Panels with Roof Structure

PUMP STATION #		PS-31		**Scheduled Visit Date:**	10/17/2019	THUR
Station Name		Rose Valley	Phone #			
Location		18 S. Longpoint Ln. Rose Valley, PA				
Start Up Date		original building 1937, updated in 2017				
CODE	**SUBCODE**	**PUMP STATION**				**COMMENTS**
371.3		**PUMP(S)**				
		Condition	new			
		No. of Pumps	2			
		Type	submersible			
371.3		Pump Manufacturer	Flygt			
		Pump Model Number	3171.095-5169			
		Year Installed	2017			
		Pump GPM	275			
		Pump TDH Ft.	224			
		Outlet Size	6"			
		Motor HP	35			
		Motor Voltage	460			
371.3		Pump Control (VFD?)	(2) Yaskawa Z1000			discrete level controls with VFDs
370.3		**WET WELL**				
		Condition	new			
		Size	7'-4" x 11'-4"			
		Concrete	precast concrete, coated			
		Lined	unlined			
		Hatch	(2) aluminum, 3' x 3' and 3' x 5'			
		Vent	passive SS			Active vent in valve vault and just passive vent with one vent on wet well
		Rails	SS			
		Cable	chain for lifting pumps			davit crane - hot dipped galv.
		Piping	4" DIP			
371.3		**CONTROL PANEL**				
		Manufacturer	GE			
		Year Installed	2017			
		Model/Serial number				
361		**INFLUENT PIPING (IF KNOWN)**				
		Material				
		Diameter	12"			appears to have a surge, maybe from another PS, that flows over the grinder
371		**GRINDER**				
		Manufacturer	Muffin Monster			
		Model/Serial number				
		HP				
		Year Installed	2017			
371		**CRAIN/HOIST**				
		Manufacturer	davit crane - hot dipped			
		Model/Serial number				
		Year Installed	2017			
360		**VALVES (DISCHARGE)**				
		Type	plug			
		Manufacturer				
		Size				
		#	5			
		Year Installed	2017			
355		**GENERATOR**				
		Manufacturer	Generac			
		Generator KW	175			
		Generator KVA	219			
		Fuel Tank (Gals)	693gal diesel			
355		ATS (manf/model #)	Generac GTS-Series			
		Year Installed	2017			
360		**FORCE MAIN**				
		Force Main Size	6"			
		Force Main Mat.	HDPE			
		Length in Feet	2,950			
		Year Installed	2017			
		Discharge Point				
		Discharge Point Location				

354.2		**BUILDING**				
		Condition	good original exterior, new interior			
		Size	approx. 14' x 14'			
		Main Structure Material	stone masonry exterior with newly rehabbed sheetrock interior			
		Roof Type	slate, hip roof			
		Roof Condition	new			
		Doors (number /material)	1			
		Lighting (Type)	fluorescent lights in ceiling			
		Year Installed	original building from 1937			
		ELECTRICAL				
371.3		MCC	480V			below grade into vault below transformer, 4kV-150
396		Alarm System (manf/ model)	Honeywell Minitrend			
		Year Installed	2017			
354.3		**HVAC**	N/A			
		Condition	good			
		Type				
		Manufacturer				
		Year Installed				
364		Flow Meter	KROHNE			
364		Chart Recorder				
354.3		Hydrants				
		GROUNDS				
354.3		Fence Length				
		Fence Type	6'H chain link			
		Year Installed	new			
354.3		Paving and Walkways	new			
371.3		**ODOR CONTROL**	N/A			
		Manufacturer				
		Type				
		MISCELLANEOUS	**DESCRIPTION OF FACILITY**			
		Other Buildings				
		Spare Parts				
		Vac Truck Suitable				
		Does the PS have a Sanitary Overflow? Size and Material?				
Debris found on the highest point in the wet well						
Does this station overflow?						
Original building was part of the original wastewater treatment plant; it is dated 1937.						
It has been rehabilitated with new slte roof and new sheetrock interior Now used as a contol room.						

PS-33 - Delaware River Interceptor Bypass PS

Facility Description (see attached Information Sheet)

PS-33 is located at 2501 Seaport Dr. and Townsend St., Chester, PA and is equipped with one (1) 1500 GPM (estimated) trash pump. Wastewater is discharged through a 6-inch force main that ties into the existing sewage collection system at adjacent interceptor. The pump station was installed in approximately 2014.

The pump wet well is an existing brick MH (4-foot diameter) with no hatchway. The control panel is custom.

The Building (10-foot-6 inches x 14 feet x 10 feet high) is a wood stud shed and arch shingles roof in good condition. The building contains one (1) 4-foot LED lighting and an overhead 7-foot x 8-foot-6-inch door. The building has an electric unit heater and is vented.

There is no generator or Automatic Transfer Switch (ATS) at this facility.

There is no fencing at this property.

Property Condition

The building and all equipment is in good condition.

Figure 1 – Pump Building

Figure 2 – Pump & Motor

Figure 3 – Building Interior

Figure 4 – Manhole & Pump Suction

PUMP STATION #		PS-33		**Scheduled Visit Date:**	10/22/2019	TUE
Station Name		Delaware River Interceptor Bypass	Phone #			
Location		Seaport Dr. and **T**ownsend Ave.				
Start Up Date		1965				
CODE	**SUBCODE**	**PUMP STATION**				**COMMENTS**
371.3		**PUMP(S)**				
		Condition	good			
		No. of Pumps	1			
		Type	trash pump			
		Pump Manufacturer	Godwin			
		Pump Model Number	CD150M Dri-Prime			
		Year Installed	approx. 2014			
		Pump GPM	1500 (est)			
		Pump **T**DH Ft.				
		Outlet Size	6"			
		Motor HP	50			
		Motor Voltage	230/460			
371.3		Pump Control (VFD?)	Schneider Altivar 212 VFD			
370.3		**WET WELL**				
		Condition	poor			
		Size	4' dia.			
		Material	existing brick MH			
		Lined	unlined			
		Hatch	no hatch			
		Vent	no vent			
		Rails	no rails			
		Cable	no cable			
		Piping	6" suction hose, 6" discharge hose			
371.3		**CONTROL PANEL**				
		Manufacturer	custom			
		Year Installed				
		Model				
361		**INFLUENT PIPING (IF KNOWN)**				
		Material				
		Diameter				
371		**GRINDER**	N/A			
		Manufacturer				
		Model/Serial number				
		HP				
		Year Installed				
371		**CRAIN/HOIST**	N/A			
		Manufacturer				
		Model				
		Year Installed				
360		**VALVES (DISCHARGE)**	N/A			
		Type				
		Manufacturer				
		Size				
		#				
		Year Installed				
355		**GENERATOR**	N/A			
		Manufacturer				
		Generator KW				
		Generator KVA				
		Fuel **T**ank (Gals)				
355		ATS (manf/model #)				
		Year Installed				
360		**FORCE MAIN**				
		Force Main Size	8"			
		Force Main Mat.	HDPE			
		Length in Feet	685			
		Year Installed	2016			
		Discharge Point				
		Discharge Point Location				

CODE	SUBCODE	PUMP STATION			COMMENTS
354.2		**BUILDING**			
		Condition	good		
		Size	10'-6"x14'x10'H		
		Main Structure Material	wood stud shed		
		Roof **T**ype	arch shingles		
		Roof Condition	good		
		Doors (number /material)	(1) overhead 7'x8'-6"		
		Lighting (**T**ype)	(1) 4' LED		
		Year Installed	2014		
		ELECTRICAL			
371.3		MCC	Acme Electric KVA transformer; service panel		
396		Alarm System (manf/ model)			
		Year Installed			
354.3		**HVAC**			
		Condition	good		
		Type	Elec. unit heater		
		Manufacturer			
		Year Installed			
364		Flow Meter	no flow meter		
364		Chart Recorder			
354.3		Hydrants			
		GROUNDS			
354.3		Fence Length	N/A		
		Fence **T**ype	N/A		
		Year Installed			
354.3		Paving and Walkways	N/A		
371.3		**ODOR CONTROL**	N/A		
		Manufacturer			
		Type			
		MISCELLANEOUS	**DESCRIPTION OF FACILITY**		
		Other Buildings			
		Spare Parts			
		Vac **T**ruck Suitable			
		Does the PS have a Sanitary Overflow? Size and Material?			
OVERALL BUILDING AND FACILITY ASSESSMENT					
Building and Pump set up is temporary. Wood shed and pump are approximately 5 years old and in good condition.					

PS-A - Brookhaven Road PS

Facility Description (see attached Information Sheet)

PS-A is located at 607 Brookhaven Rd, Rose Valley, PA and is a packaged pump station equipped with two (2) 150-GPM, 7.5HP, centrifugal Smith & Loveless pumps. Wastewater is discharged through a 4-inch DIP force main. The pump station was installed in 1997.

The pump wet well is precast concrete (approximately 5 feet in diameter) that sits below the pump assembly. The control panel is manufactured by Smith & Loveless. There are plug valves and swing check valves, installed in 1996. The influent line to the wet well does not contain a grinder.

There is no building, but an approximately 4-foot x 6-foot x 4-foot high fiberglass enclosure.

There is no generator or Automatic Transfer Switch (ATS).

The pump station is shielded on two sides by a 6-foot high solid vinyl fence.

Property Condition

The pumps and enclosure are in good condition.

Figure 1 – Pump Station Located Behind 6'-0" High Vinyl Fence

Figure 2 – Housed Pump Station

Figure 3 – Elect. Controls and Pumps

Figure 4 – Wet Well

PUMP STATION #		PS-A		**Scheduled Visit Date:**	10/17/2019	THUR
Station Name		Brookhaven Road	Phone #			
Location		607 Brookhaven Rd, Rose Valley, PA				
Start Up Date		1997				
CODE	**SUBCODE**	**PUMP STATION**				**COMMENTS**
371.3		**PUMP(S)**				
		Condition	good			
		No. of Pumps	2			
		Type	centrifugal			
371.3		Pump Manufacturer	Smith & Loveless			
		Pump Model Number	13695-xx2978			
		Year Installed	1997			from Hydro-Numatic Sale email
		Pump GPM	150			
		Pump TDH Ft.				
		Outlet Size	4"			
		Motor HP	7.5			
		Motor Voltage	230/460			
371.3		Pump Control (VFD?)	part of package system of smith loveless			
370.3		**WET WELL**				
		Condition	good			
		Size	approximately 5'			
		Material	precast concrete			
		Lined	unlined			
		Hatch	no			
		Vent	no			
		Rails	no			
		Cable	no			
		Piping	(2) 6" suction pipes with (1) 6" discharge pipe			
371.3		**CONTROL PANEL**				
		Manufacturer	Smith & Loveless			
		Year Installed	1997			
		Model/Serial number	165985			
361		**INFLUENT PIPING (IF KNOWN)**				
		Material	PVC			
		Diameter	6"			
371		**GRINDER**	N/A			
		Manufacturer				
		Model/Serial number				
		HP				
		Year Installed				
371		**CRAIN/HOIST**	N/A			
		Manufacturer				
		Model/Serial number				
		Year Installed				
360		**VALVES (DISCHARGE)**				
		Type	Plug	swing check		All part of Smith & Loveless package
		Manufacturer				
		Size				
		#				
		Year Installed	1997	1997		
355		**GENERATOR**	N/A			
		Manufacturer				
		Generator KW				
		Generator KVA				
		Fuel Tank (Gals)				
355		ATS (manf/model #)	N/A			
		Year Installed				
360		**FORCE MAIN**				
		Force Main Size	8"			
		Force Main Mat.	Steel			
		Length in Feet	1,050			
		Year Installed	1966			
		Discharge Point				
		Discharge Point Location				

CODE	SUBCODE	PUMP STATION				COMMENTS
354.2		**BUILDING**				
		Condition	Good			No building, but small fiberglass enclosu
		Size	approximately 4'x6'x4'H			
		Main Structure Material	fiberglass enclosure			
		Roof Type	N/A			
		Roof Condition	N/A			
		Doors (number /material)	N/A			
		Lighting (Type)	N/A			
		Year Installed	1996			guessing from tag on fiberglass housing
		ELECTRICAL				
371.3		MCC	N/A			All part of Smith & Loveless package
396		Alarm System (manf/ model)	N/A			All part of Smith & Loveless package
		Year Installed				
354.3		**HVAC**				
		Condition	good			
		Type	small fan & louver			
		Manufacturer				
		Year Installed	1997			
364		Flow Meter	N/A			
364		Chart Recorder	N/A			
354.3		Hydrants	N/A			
		GROUNDS				
354.3		Fence Length	6'H			3 sides only
		Fence Type	solid vinyl partial enclosure, poor condition			
		Year Installed				
354.3		Paving and Walkways	poor			
371.3		**ODOR CONTROL**				
		Manufacturer	N/A			
		Type				
		MISCELLANEOUS	**DESCRIPTION OF FACILITY**			
		Other Buildings				
		Spare Parts				
		Vac Truck Suitable				
		Does the PS have a Sanitary Overflow? Size and Material?				
OVERALL BUILDING AND FACILITY ASSESSMENT						
very small pump station, taking flow from a handful of houses						
Old, abandoned "can" station site						
(2) pumps sitting on top of precast wet well						

PS-B - Old Mill PS

Facility Description (see attached Information Sheet)

PS-B is located at 10 Old Mill Ln. Rose Valley, PA and is equipped with two (2) 250-GPM, 10 HP Smith & Loveless centrifugal pumps. Wastewater is discharged through a 6-inch force main. The original pump station was installed in 1935.

The pump wet well is concrete, assumed original (under part of building) with no hatchway. The control panel is locally fabricated. There is one (1) 4-inch Smith & Loveless Plug valve and one (1) 4-inch Smith & Loveless swing check valve. The system is monitored by a SCADA system.

The building (12-foot x 12-foot) is constructed of stone masonry exterior with lath & plaster interior walls and ceiling. The building has a hip roof with asphalt shingles roof in good condition. The building contains florescent lighting and a single wood door.

The Generator is an ONAN Cummings 35 KW/ 43.8 KVA unit with an integral diesel fuel tank.

There is no fence surrounding the facility.

Property Condition

The building is in original condition, the roof is in good condition. This pump station condition is poor to fair and needs upgrades. A Godwin CD-103 silenced Dri-prime pump is utilized for wet weather flow. The generator is in good condition. The Authority is planning to replace the pump station, since the small building dates back to 1935.

Figure 1 – Pump Station Building W. Generator to the Left

Figure 2 – Pumps with Elect. Controls

Figure 3 – Interior of Building

Figure 4 – Godwin Pump for Wet Weather Flows

PUMP STATION #		PS-B		**Scheduled Visit Date:**	10/17/2019	THUR
Station Name		Old Mill	Phone #			
Location		10 Old Mill Ln. Rose Valley, PA				
Start Up Date		1935				
CODE	**SUBCODE**	**PUMP STATION**				**COMMENTS**
371.3		**PUMP(S)**				
		Condition	updated, not new			
		No. of Pumps	2			
		Type	centrifugal pumps			
371.3		Pump Manufacturer	Smith & Loveless			
		Pump Model Number				
		Year Installed	1935			
		Pump GPM	250			
		Pump TDH Ft.				
		Outlet Size	4"			
		Motor HP	10			
		Motor Voltage				
371.3		Pump Control (VFD?)	float activated			
370.3		**WET WELL**				
		Condition				
		Size	under part of building			
		Concrete	concrete, assumed original			
		Lined				
		Hatch	no			
		Vent	no			
		Rails	no			
		Cable	no			
		Piping	4" DIP at pumps transitions to PVC to exit building			
371.3		**CONTROL PANEL**				
		Manufacturer				
		Year Installed				
		Model				
361		**INFLUENT PIPING (IF KNOWN)**				
		Material				
		Diameter				
371		**GRINDER**	N/A			
		Manufacturer				
		Model				
		HP				
		Year Installed				
371		**CRAIN/HOIST**	N/A			
		Manufacturer				
		Model				
		Year Installed				
360		**VALVES (DISCHARGE)**				
		Type	Plug	Swing Check		
		Manufacturer	Smith & Loveless	Smith & Loveless		
		Size	4"	4"		
		#	1	1		
		Year Installed				
355		**GENERATOR**				
		Manufacturer	ONAN Cummings			
		Generator KW	35			
		Generator KVA	43.8			
		Fuel Tank (Gals)				
355		ATS (manf/model #)				
		Year Installed				
360		**FORCE MAIN**				
		Force Main Size	6"			
		Force Main Mat.	CIP			
		Length in Feet	2,550			
		Year Installed	1937			
		Discharge Point				
		Discharge Point Location				

354.2		**BUILDING**				
		Condition	85-yr old building			
		Size	12'x12'			
		Main Structure Material	stone masonry exterior with lath & plaster interior walls and ceiling			
		Roof Type	Hip roof with asphalt shingles			
		Roof Condition	good			
		Doors (number /material)	1 man door, wood			
		Lighting (Type)	Fluorescent			
		Year Installed				
		ELECTRICAL				
371.3		MCC	Service Panel			
396		Alarm System (manf/ model)	OmniSite Crystal Ball			
		Year Installed				
354.3		**HVAC**	N/A			
		Type				
		Manufacturer				
		Model				
		Year Installed				
364		Flow Meter	MJK MagFlux-1			
364		Chart Recorder	N/A			
354.3		Hydrants	N/A			
		GROUNDS				
354.3		Fence Length	N/A			
		Fence Type	N/A			
		Year Installed				
354.3		Paving and Walkways	N/A			
371.3		**ODOR CONTROL**	N/A			
		Manufacturer				
		Type				
		MISCELLANEOUS	**DESCRIPTION OF FACILITY**			
		Other Buildings				
		Spare Parts				
		Vac Truck Suitable				
		Does the PS have a Sanitary Overflow? Size and Material?				
Omni onsite but not operating						
Planning to replace soon since the small building dates back to 1935. This PS condition is poor to fair and needs upgrades.						
A Godwin CD-103 silenced Dri-prime pump is utilized for wet weather flow.						

4.6. COLLECTION SYSTEM

DELCORA owns all or part of the collection systems in the following service areas: City of Chester, Chester Township, Borough of Marcus Hook, Borough of Rose Valley, Upland Borough, Parkside Borough, Trainer Borough, Edgmont Township, Pocopson Township, and Springhill Farms (Chadds Ford Township). The collection system consists of gravity piping and laterals within the right of way. A map of the collection system can be found in Appendix A, Figure A1. Collection system related cost data can be found in Section 8 for the gravity mains, manholes and force mains under account codes 361.21, 361.23, and 360.21 respectively.

4.7. CONVEYANCE SYSTEM

The following municipalities are served in whole or in part by a DELCORA owned facility:

Aldan Borough
Aston Township
Bethel Township
Brookhaven Borough
Chester Heights Borough
Darby Borough Darby Township
Easttown Township (Chester County)
Eddystone Borough
Edgmont Township
Folcroft Borough
Glenolden Borough
Haverford Township
Lansdowne Borough
Lower Chichester Township
Marcus Hook Borough
Marple Township
Middletown Township
Morton Borough
Nether Providence Township
Newtown Township
Norwood Borough
Parkside Borough
Upper Chichester Township
Upper Darby Township
Chester Township
City of Chester
Clifton Heights Borough
Collingdale Borough
Colwyn Borough
Pocopson Township (Chester County)
Prospect Park Borough
Radnor Township
Ridley Park Borough
Ridley Township
Rose Valley Borough
Rutledge Borough
Sharon Hill Borough
Springfield Township
Swarthmore Borough
Trainer Borough
Tredyffrin Township (Chester County)
Upland Borough
Upper Providence Township
Pocopson Township (Chester County)
Prospect Park Borough
Radnor Township
Ridley Park Borough
Ridley Township
Yeadon Borough

4.8. COMBINED SEWER OUTFALLS (CSOs)

The City of Chester wastewater system is partially a combined sewer system. DELCORA is under mandate from the Pennsylvania Department of Environmental Protection (DEP) to separate the sanitary sewage and storm water and eliminate the combined sewer system. The combined sewer system consists of 25 CSOs. A location map for the CSOs is provided in Appendix A, Figure A6. DELCORA has successfully eliminated 2 CSOs. The CSOs include tide gates and screening devices. CSO related cost data can be found in Section 8 under account code 362.2.

Figure 1 – 7th & Penn 1

Figure 2 – 7th & Penn 2

Figure 3 – Parker St. 1

Figure 4 – Parker St. 2

Figure 5 – 6th St.

5. OWNED PROPERTY & EASEMENTS OF VALUE

Property that was directly purchased by the Authority and easements acquired with a significant purchase price are listed in the following chart. A majority of the properties owned by the Authority were transferred as part of the purchase of the facility and cannot be isolated as a separate value. The value of said properties is listed with a purchase price of zero and included in the original purchase price of the facilities listed in Section 8 – "List of Assets and Costs". A majority of the easements were purchased for one dollar and are not listed.

6. REGULATORY REQUIREMENTS

pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Scanned to Server

Orig: B. Willert

RECEIVED
APR 23 2015
BY: 2015-0411

cc: RJW
MJS
Joe DiMatteo

April 20, 2015

CERTIFIED MAIL NO. 7013 2250 0000 7504 1694

Robert J. Willert
Executive Director
DELCORA
PO Box 999
Chester, PA 19016

Re: WQM Permit - Sewage
Sheeder Tract Subdivision
Permit No. 1505419
Authorization ID No. 1050423
Pocopson Township, Chester County

Dear Mr. Willert:

Your Water Quality Management (WQM) permit is enclosed. You must comply with all Standard and Special Conditions attached to this Permit. Please review the permit conditions and the supporting documentation.

Note: Please pay special attention to significant changes to the irrigation conditions that are outlined in the special conditions of the permit.

Any person aggrieved by this action may appeal, pursuant to Section 4 of the Environmental Hearing Board Act, 35 P.S. Section 7514, and the Administrative Agency Law, 2 Pa. C.S. Chapter 5A, to the Environmental Hearing Board, Second Floor, Rachel Carson State Office Building, 400 Market Street, P.O. Box 8457, Harrisburg, PA 17105-8457, 717.787.3483. TDD users may contact the Board through the Pennsylvania Relay Service, 800.654.5984. Appeals must be filed with the Environmental Hearing Board within 30 days of receipt of written notice of this action unless the appropriate statute provides a different time period. Copies of the appeal form and the Board's rules of practice and procedure may be obtained from the Board. The appeal form and the Board's rules of practice and procedure are also available in braille or on audiotape from the Secretary to the Board at 717.787.3483. This paragraph does not, in and of itself, create any right of appeal beyond that permitted by applicable statutes and decisional law.

IF YOU WANT TO CHALLENGE THIS ACTION, YOUR APPEAL MUST REACH THE BOARD WITHIN 30 DAYS. YOU DO NOT NEED A LAWYER TO FILE AN APPEAL WITH THE BOARD.

IMPORTANT LEGAL RIGHTS ARE AT STAKE, HOWEVER, SO YOU SHOULD SHOW THIS DOCUMENT TO A LAWYER AT ONCE. IF YOU CANNOT AFFORD A LAWYER,

YOU MAY QUALIFY FOR FREE PRO BONO REPRESENTATION. CALL THE SECRETARY TO THE BOARD (717.787.3483) FOR MORE INFORMATION.

If you have any questions, please contact Karen McDaniel at 484.250.5126 or kmcdaniel@pa.gov.

Sincerely,

Jenifer L. Fields, P.E.
Environmental Program Manager
Clean Water Program

Enclosures

cc: Pocopson Township
Chester County Health Department
Chester County Board of Commissioners
Ms. Hessler, Castle Valley Consultants
Operations-SERO
Ms. Sansoni- SERO
Ms. Lashley- SERO
Re

3800-PM-WSFR0015 1/2011
Permit

pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

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

WATER QUALITY MANAGEMENT PERMIT

PERMIT NO. 1505419

AMENDMENT NO. Renewal

APS ID. 857488

AUTH. ID. 1050423

A. PERMITTEE (Name and Address): CLIENT ID#: **110302** **DELCORA** **PO Box 999** **Chester, PA 19016**	B. PROJECT/FACILITY (Name): **Sheeder Tract Wastewater Treatment Plant**
C. LOCATION (Municipality, County): **Pocopson Township, Chester County**	SITE ID#: **656747**

D. This permit approves the renewal of sewage facilities consisting of: the existing : An influent pump station with a grinder, an aerated treatment lagoon, a storage lagoon, chlorination, and a spray irrigation system discharging effluent to 3- zones on 9.02 acres.

Pump Stations: **Influent** , **Spray Irrigation**	Lagoon Storage:	Sewage Treatment Facility:	
Design Capacity: **125** GPM , **516** GPM	Volume: **6.4** MG	Annual Average Flow: **.045150**	MGD
	Freeboard: **24** inches	Design Hydraulic Capacity: **.125**	MGD
		Design Organic Capacity: **96**	lb/day

E. APPROVAL GRANTED BY THIS PERMIT IS SUBJECT TO THE FOLLOWING:

1. **New Permits:** All construction, operations and procedures shall be in accordance with the Water Quality Management Permit application dated _____, its supporting documentation and addendums dated _____, which are hereby made a part of this permit.

   Renewal : All construction, operations and procedures shall be in accordance with the Water Quality Management Permit Amendment application dated **11/10/2014** and its supporting documentation and addendums dated _____, which are hereby made a part of this amendment.

   Except for any herein approved modifications, all terms, conditions, supporting documentation and addendums approved under Water Quality Management Permit No. _____ dated _____ shall remain in effect.

   Transfers: Water Quality Management Permit No. _____ dated _____ and conditions, supporting documentation and addendums are also made part of this transfer.

2. Permit Conditions Relating to Sewerage are attached and made part of this permit.
3. Special Conditions **I - XVI** are attached and made part of this permit.

F. THE AUTHORITY GRANTED BY THIS PERMIT IS SUBJECT TO THE FOLLOWING FURTHER QUALIFICATIONS:

1. If there is a conflict between the application or its supporting documents and amendments and the attached conditions, the attached conditions shall apply.
2. Failure to comply with the rules and regulations of DEP or with the terms or conditions of this permit shall void the authority given to the permittee by the issuance of this permit.
3. This permit is issued pursuant to the Clean Streams Law Act of June 22, 1937, P.L. 1987, as amended 35 P.S. §691.1 *et seq.* Issuance of this permit shall not relieve the permittee of any responsibility under any other law.
4. This permit shall expire on _____. The permittee shall submit an application to renew the permit no later than 180 days prior to the permit expiration date.

PERMIT ISSUED:

April 20, 2015

BY: _____

Jenifer L. Fields, P.E.
TITLE: **Clean Water Program Manager**
Southeast Regional Office

pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WATER STANDARDS AND FACILITY REGULATION

SPECIAL CONDITIONS

Water Quality Management Permit No. 1505419

Pocopson Township, Chester County

This permit is subject to the following Special Condition(s):

I. Effective disinfection to control disease producing organisms shall be the production of an effluent which will contain a concentration not greater than 200/100 ml of Fecal Coliform organisms, as a geometric average value not greater than 1,000/100 ml of these organisms in more than 10 percent of the samples tested.

II. Copies of monthly Discharge Monitoring Reports must be submitted within 28 days of the end of the monitoring period to:

Department of Environmental Protection
Southeast Regional Office
Water Management
2 East Main Street
Norristown, PA 19401

III. **Discharge Limitations and Monitoring Requirements**

Effluent from the sewage treatment plant shall be sampled from a designated sampling point and shall be limited at all times as follows:

	Discharge Limitations (mg/l)			Monitoring Requirements	
Parameter	Average Monthly	Average Weekly	Instantaneous Maximum	Measurement Frequency	Sample Type
Flow (mgd)	.045150			Continuous	Recorded
$CBOD_5$	25		50	1/Month	8 Hour Composite
Total Nitrogen*	Monitor/ Report		Monitor/ Report	1/Month	8 Hour Composite
Suspended Solids	30		60	1/Month	8 Hour Composite
Fecal Coliform	200/100 ml as geometric average			1/Month	Grab
pH	Within limits of 6.0 to 9.0 standard units at all times			1/Month	Grab

* Total Nitrogen = Total Kjeldahl Nitrogen + Nitrite (NO_2) + Nitrate (NO_3)

Additional treatment requirements include the satisfactory disposal of sludge and the reduction of quantities of oils, greases, acids, alkalis, toxic, taste and odor producing substances, inimical to the public interest to levels which will not pollute the receiving waters

IV. Groundwater Monitoring Requirements

The permittee shall effectively monitor the quality of the groundwater. The parameters to be tested, and frequency of analysis and other monitoring requirements shall be as follows:

- Quarterly analysis of groundwater sampled at groundwater monitoring wells MW-1, MW-2, MW-3, MW-4, MW-5R, MW-6, and MW-7 shall consist of: static water level, sampling depth, turbidity, pH, chloride, total phosphorus, ammonia nitrogen, nitrate nitrogen, nitrite nitrogen, total dissolved solids, fecal coliform, and alkalinity.

- Annual analysis of groundwater sampled at all groundwater monitoring wells shall consist of: total solids, settleable solids, total iron, total manganese, sulfate, and sodium.

- Groundwater elevations must be measured prior to purging the groundwater monitoring well.

- Before collection of the groundwater sample, a groundwater monitoring well shall be properly purged and allowed to recover to at least 90 percent of the well volume that was present prior to purging.

- All groundwater samples shall be collected from within the top five feet of the water elevation within the well column.

V. Groundwater Monitoring Data Reporting Requirements

All groundwater data shall be submitted to DEP **annually** and be in **report form.** The report shall be due to DEP within 28 days of the end of your annual permit cycle. For example, if your permit was issued on March 4, 2008, then your annual report is due by April 28, 2009. The annual report shall be mailed under separate cover and addressed to:

Department of Environmental Protection
Southeast Regional Office
Clean Water Program
2 East Main Street
Norristown, PA 19401

Attention: Hydrogeologist
Planning Section

The annual groundwater monitoring report shall include the following information:

1. General Information

   A. Facility name
   B. Facility permit number
   C. Facility location (including municipality and county)
   D. Facility contact information:

   - permittee name, address, and telephone number
   - contact name and title
   - facility operator name, address, and telephone number
   - facility consultant name, address, and telephone number

2. Site Information

   A. Brief narrative, including site limitations.

   B. Soil type and bedrock lithology beneath the absorption areas.

   C. Site drawings showing general location of absorption fields and monitoring wells. Drawings must show site topography.

3. Construction details of each groundwater monitoring well shall include:

   A. Well depth.
   B. Casing depth.
   C. Static water levels.
   D. Surface elevation.
   E. Well log.
   F. Water bearing zones.
   G. Top of casing elevation.
   H. Ground surface elevation.

4. Site History

   A. Date site 537 approval issued.

   B. Date site permit issued.

   C. Date groundwater monitoring began.

   D. Date treatment plant started operation.

   E. Date land application of treated wastewater started.

F. Date of any additional permit actions and description of actions (e.g., waiver of special conditions or anything else which may impact the groundwater monitoring program contained within this permit). Include copy of any correspondence in correspondence section.

G. Date and description of any enforcement action.

H. Date and description of any facility event which impacted any part of the groundwater monitoring program whether or not it resulted in an enforcement action (e.g., collapse of groundwater monitoring well, etc.).

5. Site Data

A. Average effluent flow for the year covered by the report.

B. In tabular form, the following information needs to be provided for at least the last 5 years of system operation:

i. Date of sampling.
ii. Groundwater elevation.
iii. Sampling depth.
iv. Identification of upgradient and downgradient wells.
v. The results of the analysis of the samples.

C. Background groundwater data generated prior to system start-up.

6. Comprehensive Groundwater Evaluation (CGE)

As part of the facility's 5-year permit renewal application, the permittee shall submit a report that is a result of a comprehensive evaluation of the systems impact on groundwater. A Registered P.G. must identify any trends which may pose a threat to human health or certify that none are present. Should adverse impacts to groundwater be identified, the permittee needs to recommend actions to address the potential threat.

VI. Sprayfield Weekly Maximum Hydraulic Loadings

A. Effluent flows to each sprayfield must be consistent with the maximum hydraulic loading requirements of the following table, which provides the weekly maximum irrigation gallons for each zone.

B. The permittee shall include with the monthly Discharge Monitoring Report a Supplemental Land Application System Form 3800-FM-BPNPSM0449 that indicates the gallons per day discharged to each of the zones.

C. At no time shall the application rate exceed 0.25 inch per hour.

MAXIMUM WEEKLY HYDRAULIC LOADINGS IN GALLONS PER ZONE

Month	Zone 1 3.78 ac Grass Field (gal/wk)	Zone 2 3.29 ac Wooded (gal/wk)	Zone 3 1.98 ac Grass Field (gal/wk)
Jan	51,318	44,666	26,881
Feb	51,318	44,666	26,881
Mar	153,954	133,997	80,643
Apr	153,954	133,997	80,643
May	205,272	178,663	107,524
Jun	256,590	223,328	134,404
Jul	256,590	223,328	134,404
Aug	256,590	133,997	134,404
Sep	256,590	111,664	134,404
Oct	112,900	98,265	59,138
Nov	102,636	58,065	53,762
Dec	51,318	44,666	26,881

VII. Sprayfield Operation

A. Application of the effluent shall be managed to prevent runoff from the permitted spray fields and ponding of effluent.

B. No irrigation is to occur on frozen soils.

C. No irrigation is to occur if more than 0.5 inches of rainfall has fallen during the previous 24 hours.

D. The operator is to assess soil moisture content and soil/vegetation conditions frequently. It is the operator's responsibility to inspect the fields on a routine basis to prevent and/or address damage to the irrigation fields.

E. The spray fields shall be maintained to ensure that vegetation does not interfere with or impair proper operation of the spray heads.

F. All spray fields must be managed to maintain a perennial grass or forested cover. Several times each growing season, grass fields must be harvested by cutting, with clippings removed off the spray fields. Forested fields should be maintained to remove dead and fallen wood during periods that would minimize soil compaction by equipment.

G. Sprayfield vegetation and soils must be managed in accordance with an approved annual Crop Management Plan (CMP). Upon notification by the Department, the permittee shall prepare and submit an updated CMP for review and approval.

XIII. Storage Lagoon Management

At all times, the wastewater levels in the lagoon shall be managed within the low and high water level parameters as designed. The water level shall be controlled so that a freeboard of at least 24 inches is maintained at all times. The Department must be notified if the water level is anticipated to enter freeboard.

IX. If there is a change in ownership of this facility or in permittee name, an application for transfer of permit must be submitted to the Department.

X. The authorization to discharge contained in this permit shall expire in five years from the date of issuance, or reissuance. Application for renewal of this permit, or notification of intent to cease discharging by the expiration date, must be submitted to the Department at least 180 days prior to the above expiration date (unless permission has been granted by the Department for submission at a later date). In the event that a timely and complete application for renewal has been submitted and the Department is unable, through no fault of the permittee, to reissue the permit before the above expiration date, the terms and conditions of this permit will be automatically continued and will remain fully effective and enforceable pending the grant or denial of the application for permit renewal. The application for renewal shall be submitted on the appropriate Water Quality Management Part II Application forms and shall include a tabulated summary of all groundwater monitoring data for the previous five years, including a discussion of groundwater quality trends resulting from this discharge.

XI. Unless, otherwise, specified in this permit, the test procedures for analysis of pollutants shall be those contained in 40 C.F.R. Part 136, or alternative test procedures approved pursuant to that Part. For the analysis of CBOD5, consult Section 507 of Standard Methods.

XII. If the permittee monitors any pollutant more frequently than the permit requires, the results of this monitoring shall be incorporated, as appropriate, into the calculations used to report self-monitoring data on the DMR.

XIII. Recording of Results

For each measurement or sample taken pursuant to the requirements of this permit, the permittee shall record the following information:

1. The exact place, date, and time of sampling or measurement.
2. The person(s) who performed the sampling or measurement.
3. The dates the analyses were performed.
4. The person(s) who performed the analyses.
5. The analytical techniques or methods used.
6. The results of such analyses.

XIV. Recordkeeping and Retention

The permittee shall keep records of operation and efficiency of the wastewater treatment facilities. All records of monitoring activities and results (including all original strip chart recordings for continuous monitoring instrumentation and calibration and maintenance records), copies of all reports required by this permit, and records of all data used to complete the application for this permit shall be retained by the permittee for three (3) years. The three-year period shall be extended as requested by the Department.

XV. Laboratory Certification

The Environmental Laboratory Accreditation Act of 2002 requires that all environmental laboratories register with the Department of Environmental Protection. An environmental laboratory is any facility engaged in the testing or analysis of environmental samples required by a statute administered by the Department relating to the protection of the environment or of public health, safety, and welfare.

VXI. The facility shall be operated under the charge of a responsible operator(s) certified under the Pennsylvania Water and Wastewater Systems Operations Certification Act (Act 11). The operator(s) shall comply with the continuing education requirements required under the regulations and guidelines related to Act 11.

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COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF POINT AND NON-POINT SOURCE MANAGEMENT
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

PRIMARY FACILITY NAME/ADDRESS

NAME Sheeder Tract Subdivision STP
CLIENT Pocopson Township Chester County
ADDRESS PO Box 999
Chester, PA 19016
LOCATION Pocopson Township
Chester County
WATERSHED 3-H

1505419
PERMIT NUMBER

Sprayfield Zones 1,2 and 3
OUTFALL NUMBER

Reporting Frequency:
DMR Effective From:
DMR Effective To:
Permit Expires: April 30 2020
Permit Application Due: November 1, 2019
___ Check Here if No Discharge
NOTE: Read Instructions before completing this form

MONITORING PERIOD						
YEAR	MO	DAY	TO	YEAR	MO	DAY

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		Average	Maximum	UNITS	Average Monthly	Average Weekly	Inst. Maximum	UNITS			
FLOW	SAMPLE MEASUREMENT			MGD	XXXX	XXXX	XXXX	XXXX		CONTINOUS	METER
	PERMIT REQUIREMENT	.045150	MONITOR/ REPORT		XXXX	XXXX	XXXX				
CBOD5	SAMPLE MEASUREMENT	XXXX	XXXX	XXXX		XXXX		MG/L		1/MONTH	8HR COMPOSITE
	PERMIT REQUIREMENT	XXXX	XXXX		25	XXXX	50				
TSS	SAMPLE MEASUREMENT	XXXX	XXXX	XXXX		XXXX		MG/L		1/MONTH	8HR COMPOSITE
	PERMIT REQUIREMENT	XXXX	XXXX		30	XXXX	60				
TOTAL NITROGEN	SAMPLE MEASUREMENT	XXXX	XXXX	XXXX		XXXX		MG/L		1/MONTH	8HR Composite
	PERMIT REQUIREMENT	XXXX	XXXX		MONITOR/ REPORT	XXXX	MONITOR/ REPORT				
FECAL COLIFORM	SAMPLE MEASUREMENT	XXXX	XXXX	XXXX		XXXX	XXXX	#/100ml		1/MONTH	GRAB
	PERMIT REQUIREMENT	XXXX	XXXX		200/100ML GEOMETRIC MEAN	XXXX	XXXX				
pH	SAMPLE MEASUREMENT	XXXX	XXXX	XXXX		XXXX		SU		1/MONTH	GRAB
	PERMIT REQUIREMENT	XXXX	XXXX		6.0 MINIMUM	XXXX	9.0 MINIMUM				

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER	I certify under penalty of law that this document was prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations. See 18 Pa. C.S. § 4904 (relating to unsworn falsification).		TELEPHONE		DATE		
TYPED OR PRINTED		SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	AREA CODE	NUMBER	YEAR	MO	DAY

COMMENTS *(Report all violations on the "Non-Compliance Reporting Form")*

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

INSTRUCTIONS FOR COMPLETING DISCHARGE MONITORING REPORTS (DMRs)

General

One or more Discharge Monitoring Reports (DMRs) are attached to your permit for reporting the results of self-monitoring activities as required by your permit. You should make copies of the DMRs for your ongoing use, unless you elect to participate in the Department of Environmental Protection's (DEP's) electronic DMR (eDMR) program (see www.dep.state.pa.us/edmr).

- Reporting frequencies will vary depending on the monitoring frequencies listed in your permit, and are generally monthly, quarterly semi-annually and annually.
- Your reports must be received by DEP on the 28th day of the month following the end of the reporting period, unless otherwise specified in Part C of your permit.
- Your permit may require submission of DMRs to other agencies, including the U.S. Environmental Protection Agency (EPA).
- If you receive DMRs in the mail from EPA, please discontinue use of DMR Form No. 3800-FM-BPNPSM0462 and begin using EPA's DMRs.
- DMRs will generally include pre-populated information for permittee name and address, facility location, permit number, outfall number, permit expiration date, parameter names, and permit requirements. If you identify any errors on a DMR issued by DEP, please contact the DEP regional office that issued your permit. If you identify any errors on a DMR issued by EPA, please contact DEP's Central Office at 717-787-6744. **DO NOT make changes to DMRs issued to you.**
- You may use computer-generated replicas of Form No. 3800-FM-BPNPSM0462 or of EPA's DMR if you receive prior approval from DEP and EPA. **DEP reserves the right to instruct you to discontinue the submission of computer-generated DMRs if the permit requirements you entered on the form are inaccurate.**

Instructions

1. Enter statistical results into each blank field below the "VALUE" column headers. Results must be reported in the same units shown on the DMR.
2. Sum the total number of excursions or exceedances of permit limits across the row for each parameter and enter the value into the "NO. EX" field. For example, if the permit contains limits of 6.0 S.U. (Minimum) and 9.0 S.U. (Maximum) for pH, and the Minimum and Maximum results are 5.9 S.U. and 9.1 S.U., respectively, enter "2" into the "NO. EX" field.
3. Report the actual sampling frequency and sample type utilized during the reporting period in the fields corresponding to "Frequency of Analysis" and "Sample Type", respectively.
4. Type the name of the principal executive officer (or an authorized agent designated by a principal executive officer) who is taking responsibility for the report, sign the report (should be in ink), enter the telephone number of the responsible individual, and record the date that the report was signed. Mail only original, signed copies of DMRs.
5. In the Comments section at the bottom of the DMR, you may write a brief summary of violations in this section; however, DEP requests that all violations during the monitoring period be reported in more detail on DEP's **Non-Compliance Reporting Form** (3800-FM-BPNPSM0440) and be submitted as an attachment to the DMR. Other uses of the Comments Section include explanations of attachments to the DMR, explanations for the unavailability of data, and brief summaries of issues that have affected operations or effluent quality during the monitoring period. Always consider attaching a letter or separate document to explain your situation in more detail.

No Discharge or No Data Available

If there was no discharge at all from an outfall during the monitoring period, check the "No Discharge" box on the top of the DMR. Complete the information above and below the table and mail the DMR to the appropriate agencies. Be sure to sign and date the DMR.

If there was no discharge of a specific parameter (e.g., if a chlorine limit is in the permit but chlorine was not used for disinfection during the entire reporting period), or if data are not available for a specific parameter for the entire reporting period, do not leave the DMR blank. Instead, report one of the following No Data Indicator (NODI) codes that apply to your situation in the appropriate value field, and **provide an explanation as an attachment to the DMR**:

A Use if you are exempted from monitoring the parameter because of a General Permit condition.

E Use if all samples or results are not available for the reporting period due to equipment failure or because sample collection was overlooked or samples could not be collected for the parameter.

GG Use if your permit requires sample collection and analysis only under certain conditions and those conditions were not met during the reporting period (e.g., report chlorine results only when chlorination system is used).

FF Other: use if there is any reason for the absence of data that is not covered by those above.

If you have at least one result for a parameter, the value should be reported and not a NODI code.

Calculations

The following explains how to calculate statistical values that are commonly required by permits:

Monthly Average – For Loading (lbs/day), sum the total of daily loadings and divide by the number of samples during the month. To calculate the daily loading, multiply the daily concentration (mg/l) by the flow (MGD) on the date of sampling and a conversion factor of 8.34. For Concentration, sum the total of daily concentrations and divide by the number of samples.

Weekly Average – For Loading (lbs/day), sum the total of average daily loadings during each week of the reporting period (beginning on a Sunday and ending on a Saturday) and divide by the number of samples during the week. For Concentration, sum the total of daily concentrations each week and divide by the number of samples. Report the maximum weekly average on the DMR.

Maximum Daily ("Daily Max") – Report the maximum concentration or load measured during a 24-hour period during the reporting period; if multiple measurements are taken daily, include all data in the analysis.

Instantaneous Maximum ("IMAX") – Report the maximum result obtained by a grab sample for a specific pollutant over the entire reporting period covered by a DMR.

Instantaneous Minimum ("Minimum") – Report the minimum result obtained by a grab sample for a specific pollutant over the entire reporting period covered by a DMR.

Total Monthly Load (lbs) – Sum the total of average daily loadings, divide by the number of samples during the month, and multiply by the number of days in the month.

Geometric Mean – Report the average of a set of *n* sample results given by the *n*th root of their product. If any result is zero (0), substitute 1 for the calculation. For example, five samples were analyzed with the following results: 20, 300, 400, 500, and 0. The calculation of geometric mean is as follows (note that you will need to use the power function on a calculator):

$$\sqrt[5]{20 \cdot 300 \cdot 400 \cdot 500 \cdot 1} = \sqrt[5]{1{,}200{,}000{,}000} = (1{,}200{,}000{,}000)^{1/5} = \mathbf{65}$$

Non-Detect Data

Conventional and Toxic Parameters

For calculating average values of data sets in which there are some "detections" (results at or above the laboratory reporting limit) and some "non-detect" data (results reported below the laboratory reporting limit), use the reporting limit for non-detect data. In other words, ignore the less than (<) symbol for statistical calculations and include the < symbol with the statistical result if there is at least one non-detect result in the data set. For example, four samples were analyzed with the following results: < 1.0, 2.0, < 1.0, and 1.0. The average statistical result is < 1.3.

Where the permit includes an effluent limitation for a parameter that is less than the most sensitive detection limit available, and the laboratory reports a value at or below the lowest level specified by the permit, you may use zero (0) in the calculation in lieu of the reporting limit, if the parameter is identified in 25 Pa. Code Chapter 16, Appendix A, Tables 2A and 2B. In general, parameters with limitations that are less than the most sensitive detection limit will be identified in Part C of the permit, if applicable.

Bacteria Parameters

Report all "non-detect" (e.g., < 2) and "too numerous to count" (TNTC) (e.g., > 2,000) results on DMR supplemental forms as reported by the laboratory. Do not report "TNTC" on supplemental forms, but instead report a value qualified with the">" symbol. Where a data set includes one or more "non-detect" and/or TNTC results, calculate the geometric mean by ignoring qualifying symbols, but report the value with the symbol. If a data set includes both ">" and "<" qualifiers, the ">" qualifier takes precedence for reporting. For all "non-detect" values, specify in the Comments section of the DMR the maximum volume filtered at the laboratory.

Example 1 – For results are determined, < 2, 10, 20, and 30. The geometric mean should be reported as $< (2 \bullet 10 \bullet 20 \bullet 30)^{0.25} = < 10$. Specify the maximum volume filtered for the < 2 result in the DMR Comments.

Example 2 – Three results are determined, < 2, 1,000, and > 2,000. The geometric mean should be reported as $> (2 \bullet 1{,}000 \bullet 2{,}000^{0.333} = > 158$.

Rounding and Precision

Statistical values reported on the DMR should be rounded to the same number of decimal places as the limit for the parameter as set forth in the permit. If the permit does not contain a limit but requests monitoring only, statistical values for concentration results should be rounded to the maximum number of decimal places in the data set as reported by the laboratory or the instrument used for analysis. If mass loads must be reported and there is no limit, round statistical values to the nearest whole number, unless the calculated number is less than one, in which case the value should be rounded to one significant figure (e.g., 0.1, 0.05, etc.). If the number you are rounding is followed by 5, 6, 7, 8, or 9, round the number up, otherwise round down.

The documents "Discharge Monitoring Reports Overview and Summary" (3800-BK-DEP3047) and "Management of Non-Detect Results for Discharge Monitoring Reports" (3800-FS-DEP4262) contain more information and are incorporated by reference. These documents are available on DEP's website.

Permit No. 1505419

pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

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

PERMIT CONDITIONS RELATING TO SEWERAGE

For use in Water Quality Management Permits

(Check boxes that apply)

General

☐ 1. The Department of Environmental Protection (DEP) considers the licensed Professional Engineer whose seal is affixed to the design documents to be fully responsible for the adequacy of all aspects of the facility design.

☒ 2. The permittee shall adopt and enforce an ordinance requiring the abandonment of privies, cesspools or similar receptacles for human waste and onlot sewage disposal systems on the premises of occupied structures accessible to public sewers. All such structures must be connected to the public sewers.

☐ 3. The outfall sewer or drain shall be extended to the low water mark of the receiving body of water. Where necessary to ensure proper mixing and waste assimilation, an outfall sewer or drain may be extended with appurtenances below the low water mark and into the bed of a navigable stream provided that the permittee has secured an easement, right-of-way, license or lease from DEP in accordance with Section 15 of the Dam Safety and Encroachments Act, the Act of November 26, 1978, P.L. 1375, as amended.

☒ 4. The approval is specifically made contingent on the permittee acquiring all necessary property rights, by easement or otherwise, providing for the satisfactory construction, operation, maintenance and replacement of all sewers or sewerage structures in, along or across private property with full rights of ingress, egress and regress.

☐ 5. When construction of the approved sewerage facilities is completed and before they are placed in operation, the permittee shall notify DEP in writing so that a DEP representative may inspect the facilities.

☐ 6. The approval of the plans, and the authority granted in this permit, if not specifically extended, shall cease and be null and void 2 years from the issuance date of this permit unless construction or modification of the facilities covered by this permit has begun on or before the second anniversary of the permit date.

☒ 7. If, at any time, the sewerage facilities covered by this permit create a public nuisance, including but not limited to, causing malodors or causing environmental harm to waters of the Commonwealth, DEP may require the permittee to adopt appropriate remedial measures to abate the nuisance or harm.

☒ 8. If, after the issuance of this permit, DEP approves a municipal sewage facilities official plan or an amendment to an official plan under Act 537 (Pennsylvania Sewage Facilities Act, the Act of January 24, 1966, P.L. 1535 as amended) in which sewage from the herein approved facilities will be treated and disposed of at other planned facilities, the permittee shall, upon notification from the municipality or DEP, provide for the conveyance of its sewage to the planned facilities, abandon use and decommission the herein approved facilities including the proper disposal of solids, and notify DEP accordingly. The permittee shall adhere to schedules in the approved official plan, amendments to the plan, or other agreements between the permittee and municipality. This permit shall then, upon notice from DEP, terminate and become null and void and shall be relinquished to DEP.

☒ 9. This permit does not relieve the permittee of its obligations to comply with all federal, interstate, state or local laws, ordinances and regulations applicable to the sewerage facilities.

☒ 10. This permit does not give any real or personal property rights or grant any exclusive privileges, nor shall it be construed to grant or confirm any right, easement or interest in, on, to or over any lands which belong to the Commonwealth.

☐ 11. The authority granted by this permit is subject to all effluent requirements, monitoring requirements and other conditions as set forth in NPDES Permit No. and all subsequent amendments and renewals. No discharge is authorized from these facilities unless approved by an NPDES Permit.

Construction

☒ 12. This permit is issued under the authorization of The Clean Streams Law and 25 Pa. Code Chapter 91. The permittee shall obtain all necessary permits, approvals and/or registrations under 25 Pa. Code Chapters 102, 105 and 106 prior to commencing construction of the facilities authorized by this permit, as applicable. The permittee should contact the DEP office that issued this permit if there are any questions concerning the applicability of additional permits.

☐ 13. The facilities shall be constructed under the supervision of a Pennsylvania licensed Professional Engineer in accordance with the approved reports, plans and specifications.

☐ 14. A Pennsylvania licensed Professional Engineer shall certify that construction of the permitted facilities was completed in accordance with the application and design plans submitted to DEP, using "Post Construction Certification" form (3800-PM-WSFR0179a). It is the permittee's responsibility to ensure that a Professional Engineer is on-site to provide the necessary oversight and/or inspections to certify the facilities. The certification must be submitted to DEP before the facility is placed in operation. As-built drawings, photographs (if available) and a description of all deviations from the application and design plans must be submitted to DEP within 30 days of certification.

☒ 15. Manhole inverts shall be formed to facilitate the flow of the sewage and to prevent the stranding of sewage solids. The manhole structure shall be built to prevent undue infiltration, entrance of street wash or grit and provide safe access to facilitate manhole maintenance activities.

☒ 16. The local Waterways Conservation Officer of the Pennsylvania Fish and Boat Commission (PFBC) shall be notified when the construction of any stream crossing and/or outfall is started and completed. A written permit must be secured from the PFBC if the use of explosives in any waterways is required and the permittee shall notify the local Waterways Conservation Officer when explosives are to be used.

Operation and Maintenance

☒ 17. The permittee shall maintain records of "as-built" plans showing all the treatment facilities as actually constructed together with facility operation and maintenance (O&M) manuals and any other relevant information that may be required. Upon request, the "as-built" plans and O&M manuals shall be filed with DEP.

☒ 18. The sewers shall have adequate foundation support as soil conditions require. Trenches shall be back-filled to ensure that sewers will have proper structural stability, with minimum settling and adequate protection against breakage. Concrete used in connection with these sewers shall be protected from damage by water, freezing, drying or other harmful conditions until cured.

☒ 19. Stormwater from roofs, foundation drains, basement drains or other sources shall not be admitted directly to the sanitary sewers.

☒ 20. The approved sewers shall be maintained in good condition, kept free of deposits by flushing or other cleaning methods and repaired when necessary.

☒ 21. The sewerage facilities shall be properly operated and maintained to perform as designed.

☒ 22. The attention of the permittee is called to the highly explosive nature of certain gases generated by the digestion of sewage solids when these gases are mixed in proper proportions with air and to the highly toxic character of certain gases arising from such digestion or from sewage in poorly ventilated compartments or sewers. Therefore, at all places throughout the sewerage facilities where hazard of fire, explosion or danger from toxic gases may occur, the permittee shall post conspicuous permanent and legible warnings. The permittee shall instruct all employees concerning the aforesaid hazards, first aid and emergency methods of meeting such hazards and shall make all necessary equipment and material accessible.

☒ 23. An operator certified in accordance with the Water and Wastewater Systems Operator Certification Act of February 21, 2002, 63 P.S. §§1001, *et seq.* shall operate the sewage treatment plant.

☒ 24. The permittee shall properly control any industrial waste discharged into its sewerage system by regulating the rate and quality of such discharge, requiring necessary pretreatment and excluding industrial waste, if necessary, to protect the integrity or operation of the permittee's sewerage system.

☒ 25. There shall be no physical connection between a public water supply system and a sewer or appurtenance to it which would permit the passage of any sewage or polluted water into the potable water supply. No water pipe shall pass through or come in contact with any part of a sewer manhole.

☒ 26. All connections to the approved sanitary sewers must be in accordance with the official Act 537 Plan and, if applicable, a corrective action plan as contained in the approved Title 25 Pa. Code Chapter 94 Municipal Wasteload Management Annual Report.

☒ 27. Collected screenings, slurries, sludge and other solids shall be handled and disposed of in compliance with Title 25 Pa. Code Chapters 271, 273, 275, 283 and 285 (related to permits and requirements for land filling, land application, incineration and storage of sewage sludge), Federal Regulations 40 CFR 257 and the Federal Clean Water Act and its amendments.

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BUREAU OF POINT AND NON-POINT SOURCE MANAGEMENT

SUPPLEMENTAL LABORATORY ACCREDITATION FORM[1]

Permittee Name: DELCORA

Address: PO Box 999
Chester, PA 19016

PERMIT NUMBER	MONITORING PERIOD Year/Month/Day						
1505419				TO			

PARAMETER	ANALYSIS METHOD	LAB NAME	LAB ID NUMBER[2]

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

Name/Title Principal Executive Officer _____

Phone: _____

Signature of Principal Executive Officer or Authorized Agent _____

Date: _____

[1] Submit this form with the first Discharge Monitoring Report (DMR) or Annual Report, where sample results are submitted to the Department for compliance purposes. You do not need to send this form to the Department again UNLESS there has been a change to the lab(s), parameter(s) or method(s) of analysis.

[2] For parameter(s) covered under accreditation-by-rule, submit the lab's registration number in lieu of an accreditation number.

3800-FM-BPNPSM0449 3/2012

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BUREAU OF POINT AND NON-POINT SOURCE MANAGEMENT

SUPPLEMENTAL REPORT
LAND APPLICATION SYSTEMS

Facility Name: Sheeder Tract Subdivision
Municipality: Pocopson Township County: Chester
Watershed: 3-H

Month: _____ Year: _____
Permit No.: 1505419 Outfall No.: _____
This permit will expire on

	Zone: 1 Acres: 3.78	Zone: 2 Acres: 3.29	Zone: 3 Acres: 1.98	Zone: Acres:	Zone: Acres:	Precipitation		Average Temp	Ground Conditions
Day	Gallons	Gallons	Gallons	Gallons	Gallons	Inches	Type	°F	(Wet, Dry, Frozen)
1									
2									
3									
4									
5									
6									
7									
8									
9									
10									
11									
12									
13									
14									
15									
16									
17									
18									
19									
20									
21									
22									
23									
24									
25									
26									
27									
28									
29									
30									
31									
Totals:									

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

Prepared By: _____ Signature: _____

Title: _____ Date: _____

COMMONWEALTH OF PENNSYLVANIA
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INSTRUCTIONS FOR COMPLETING LAND APPLICATION SYSTEMS SUPPLEMENTAL REPORT

Use this form to document wastewater management activities for facilities with land application programs (e.g., surface or subsurface irrigation, drip irrigation, etc.) approved under a Water Quality Management (WQM) permit.

1. Enter Facility Name, Municipality, County, Watershed No., Month, Year, Permit No., Outfall No. (if applicable) and Permit Expiration Date (if applicable).

2. Next to each "Zone" heading (this may also be considered "land application site"), enter a unique identifier. For example, "1," "2," etc. or "Site 1," Site 2," etc. If the name of the zone or site is too long for the space provided, please use an abbreviation. Up to five zones can be accommodated on one report. If you have more than five zones, please use more sheets. Next to each "Acres" heading, enter the number of acres that receive effluent (e.g., "wettable acres").

3. Enter the daily volume (gallons) applied onto each zone.

4. Enter the average daily temperature at the land application site. An on-site temperature monitoring system is recommended, but other approaches may be acceptable, such as use of local airport data.

5. Enter the daily ground surface conditions (site-wide). Recommended entries include "dry," "wet," and "frozen," but others may be used.

6. Type the name of the person who prepared the form, the person's job title, and sign and date the form after reading the certification statement.

3800-FM-BPNPSM0439 Rev. 3/2014

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

SUPPLEMENTAL REPORT – CHEMICAL ADDITIVES USAGE

Facility Name: Sheeder Tract Subdivision
Municipality: Pocopson Township County: Chester
Watershed: 3-H

Month: _____ Year: _____
NPDES Permit No.: 1505419 Outfall No.: _____
Renewal application due **180 days** prior to expiration
This permit will expire on

Day	Chemical Names															
	gallons	lbs	gallons	lbs	gallons	lbs	gallons	lbs	gallons	lbs	gallons	lbs	gallons	lbs	gallons	lbs
1																
2																
3																
4																
5																
6																
7																
8																
9																
10																
11																
12																
13																
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29																
30																
31																
Average																
Maximum																

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

Prepared By: _____ Signature: _____

Title: _____ Date: _____

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

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DEPARTMENT OF ENVIRONMENTAL PROTECTION

INSTRUCTIONS FOR COMPLETING CHEMICAL ADDITIVES USAGE SUPPLEMENTAL REPORT

1. Enter Facility Name, Municipality, County, Watershed No., Month, Year, NPDES Permit No., Outfall No. and Permit Expiration Date. A separate sheet is required for each outfall that receives chemical additives.

2. In the spaces below the Chemical Names header in the table, enter the chemical additives used at the facility. If more than eight additives are used per Outfall, add more sheets.

3. Enter the daily usage rates for each chemical. Enter additives introduced in liquid form in the "gallons" column and additives in solid form (or if you have calculated the mass equivalent of liquid additives) under the "lbs" column.

4. Calculate and report the average and maximum usage rates for each chemical at the bottom of the table.

5. Type the name of the person who prepared the form, the person's job title, and sign and date the form after reading the certification statement.

3800-FM-BPNPSM0440 3/2012

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

NON-COMPLIANCE REPORTING FORM

Use this supplemental form to report all permit violations and any other non-compliance that may endanger health or the environment, in accordance with your permit. Complete all sections that apply. If you are reporting violations of permit limits, monitoring requirements or schedules that do not pose an immediate threat to health or the environment, you may attach this form to the Discharge Monitoring Report (DMR). **Title 25, Pa. Code §§ 91.33 and 91.34 (regarding incidents causing or threatening pollution and activities utilizing pollutants, respectively), in part requires immediate notification by telephone to the Department of pollution incidents, remediation, and may require an additional report on the incident or plan of pollution prevention measures.** If you are reporting other non-compliance events, and the reporting deadline does not coincide with your submission of the DMR, it should be submitted separately to the Department by the reporting deadline set forth in the permit. See instructions for more information.

Facility Name: Sheeder Tract Subdivision Month: _____ Year: _____

Municipality: Pocopson Township County: Chester Permit No.: 1505419

☐ **Violations of Permit Effluent Limitations***

Date	Parameter	Permit Limit	Units	Statistical Code	Result	Units	Cause of Violation	Corrective Action Taken

☐ **Sanitary Sewer Overflows and Other Unauthorized Discharges***

Event Date	Substance Discharged	Location	Volume (gals)	Duration (hrs)	Receiving Waters	Impact on Waters	Cause of Discharge	Date DEP Notified

☐ **Other Permit Violations***

☐ Sample collection less frequent than required Explain _____

☐ Sample type not in compliance with permit Explain _____

☐ Violation of permit schedule Explain _____

☐ Other Explain _____

☐ Other Explain _____

*** If the space provided is not sufficient to record all information, please attach additional sheets.**

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

Prepared By: _____ Signature: _____

Title: _____ Date: _____

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

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DEPARTMENT OF ENVIRONMENTAL PROTECTION

INSTRUCTIONS FOR COMPLETING NON-COMPLIANCE REPORTING FORM

Use this supplemental form to report all permit violations and any other non-compliance that may endanger health or the environment, in accordance with your permit. Complete all sections that apply. If you are reporting violations of permit limits, monitoring requirements or schedules that do not pose an immediate threat to health or the environment, you may attach this form to the Discharge Monitoring Report (DMR). If you are reporting other non-compliance events, and the deadline for a written report (e.g., 5 days) does not coincide with your submission of the DMR, this form should be submitted separately to the Department by the reporting deadline set forth in the permit.

If you are unsure of whether an incident constitutes non-compliance that may endanger health or the environment, it is recommended that you notify the Department verbally as soon as possible after you become aware of the incident. Title 25, Pa. Code §§ 91.33 and 91.34 (regarding incidents causing or threatening pollution and activities utilizing pollutants, respectively), in part requires immediate notification by telephone to the Department of pollution incidents, remediation, and may require an additional report on the incident or plan of pollution prevention measures.

Instructions:

1. Enter the name of the facility, the municipality and county where it is located, the month and year when violations occurred, and the NPDES or WQM permit number for the facility.

2. If there were violations of permit effluent limitations during the month, check the box next to "Violations of Permit Effluent Limitations." (Note – if using the electronic version of this form, check the boxes first, and then select Tools – Unprotect Document to enter additional information). Enter the date of the violation (if a violation of a minimum or maximum limit, the date of sample collection, or if a violation of an average limit, the end of the monitoring period), the parameter name, the permit limit and units, the statistical code (e.g., "MIN", "MAX", "MO AVG", etc.), the measured result and units, the cause of the violation and the corrective action taken. **If there are more than two violations during the monitoring period and/or if the space provided is insufficient to explain the cause or corrective action, please attach additional pages.**

3. If there are Sanitary Sewer Overflow (SSO) discharges or other unauthorized discharges from the facility (e.g., spills, leaks, etc.) that enter or have the potential to enter waters of the Commonwealth, including groundwater, notify DEP by phone as soon as possible, and document the discharge on this form by checking the box next to "Sanitary Sewer Overflows and Other Unauthorized Discharges." Record the event (discharge) date, the substance discharged (e.g., sewage, on-site chemicals, etc.), the location where the discharge occurred (e.g., manhole number, pump station name, equipment description, etc.), the volume discharged (gallons), the approximate duration of the discharge (hours), the receiving waters (name of stream or groundwater), the impact on the receiving waters, if observed (e.g., solids deposition, foam, fish kill, etc.), the cause of the discharge, and the date on which the Department was verbally notified. **If there are more than two discharge events during the monitoring period and/or if the space provided is insufficient to explain the discharge, please attach additional pages.**

4. If there are other violations of the permit, check the box next to "Other Permit Violations," and check the appropriate box that describes the violation type. If not identified on the form, check the box next to "Other" and provide a written explanation. **If the space provided is insufficient to explain the violation, please attach additional pages.**

5. Type your name and title and sign and date the form after reading the certification statement.

If you have questions about completing this form, contact the Clean Water Program Operations Section of the Department in your region:

Southeast Region – (484) 250-5970
Northeast Region – (570) 826-2553
Southcentral Region – (717) 705-4707
Northcentral Region – (570) 327-0532
Southwest Region – (412) 442-4060
Northwest Region – (814) 332-6942

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DEPARTMENT OF ENVIRONMENTAL PROTECTION

Orig: R. Willert

RECEIVED
APR 20 2018
By 2018-0521

Fwd: BAB

April 11, 2018

CERTIFIED MAIL NO. 7015 3010 0001 5161 8870

Mr. Robert Willert
DELCORA
100 East 5th Street
Chester, PA 19013

cc: RJW, MJD, Gober, Piro,
M. Kawamoto-Castle Valley, File

Re: WQM Permit - Sewage
Corinne Village Subdivision
Permit No. 1507415
Authorization ID No. 1213843
Pocopson Township
Chester County

Dear Mr. Willert:

Your Water Quality Management (WQM) permit is enclosed. You must comply with all Standard and Special Conditions attached to this Permit.

Any person aggrieved by this action may appeal, pursuant to Section 4 of the Environmental Hearing Board Act, 35 P.S. Section 7514, and the Administrative Agency Law, 2 Pa.C.S. Chapter 5A, to the Environmental Hearing Board, Second Floor, Rachel Carson State Office Building, 400 Market Street, P.O. Box 8457, Harrisburg, PA 17105-8457, 717.787.3483. TDD users may contact the Board through the Pennsylvania Relay Service, 800.654.5984. Appeals must be filed with the Environmental Hearing Board within 30 days of receipt of written notice of this action unless the appropriate statute provides a different time period. Copies of the appeal form and the Board's rules of practice and procedure may be obtained from the Board. The appeal form and the Board's rules of practice and procedure are also available in braille or on audiotape from the Secretary to the Board at 717.787.3483. This paragraph does not, in and of itself, create any right of appeal beyond that permitted by applicable statutes and decisional law.

IF YOU WANT TO CHALLENGE THIS ACTION, YOUR APPEAL MUST REACH THE BOARD WITHIN 30 DAYS. YOU DO NOT NEED A LAWYER TO FILE AN APPEAL WITH THE BOARD.

IMPORTANT LEGAL RIGHTS ARE AT STAKE, HOWEVER, SO YOU SHOULD SHOW THIS DOCUMENT TO A LAWYER AT ONCE. IF YOU CANNOT AFFORD A LAWYER, YOU MAY QUALIFY FOR FREE PRO BONO REPRESENTATION. CALL THE SECRETARY TO THE BOARD (717.787.3483) FOR MORE INFORMATION.

If you have any questions, please contact Mr. James Roth at 484.250.5169.

Sincerely,

Sachin Shankar

for Environmental Program Manager
Clean Water Program

Enclosures

cc: Chester County Health Department
Ms. Hessler, P.E. – Castle Valley Consultants, Inc.
Ms. Sansoni (scanned copy)
Mr. Evans (scanned copy)
Operations
Re 30 (GJE18CLW)101-7

3800-PM-WSFR0015 1/2011
Permit

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

WATER QUALITY MANAGEMENT PERMIT

PERMIT NO. 1507415

AMENDMENT NO. _____

APS ID. 959227

AUTH. ID. 1213843

A. PERMITTEE (Name and Address): CLIENT ID#: 42332 **DELCORA** **100 East 5th Street** **Chester, PA 19013**	B. PROJECT/FACILITY (Name): **Corinne Village WWTF**
C. LOCATION (Municipality, County): **Pocopson Township, Chester County**	SITE ID#: **661927**
D. THIS PERMIT APPROVES THE OPERATION OF WASTEWATER TREATMENT FACILITIES CONSISTING OF: **an Influent pump station, a treatment lagoon, a storage lagoon, a process control building, multi-media filters, and six drip disposal fields divided into 12 zones.**	

Pump Stations: _____ Design Capacity: _____ GPM	Manure Storage: Volume: _____ MG Freeboard: _____ inches	Sewage Treatment Facility: Annual Average Flow: **0.02** MGD Design Hydraulic Capacity: **0.02** MGD Design Organic Capacity: **50.5** lb/day

E. APPROVAL GRANTED BY THIS PERMIT IS SUBJECT TO THE FOLLOWING:

1. **New Permits:** All construction, operations and procedures shall be in accordance with the Water Quality Management Permit application dated **1/12/2018**, its supporting documentation and addendums dated _____, which are hereby made a part of this permit.

   Amendments: All construction, operations and procedures shall be in accordance with the Water Quality Management Permit Amendment application dated _____ and its supporting documentation and addendums dated _____, which are hereby made a part of this amendment.

   Except for any herein approved modifications, all terms, conditions, supporting documentation and addendums approved under Water Quality Management Permit No. _____ dated _____ shall remain in effect.

   Transfers: Water Quality Management Permit No. _____ dated _____and permit renewal issued_____ have been superseded by this permit transfer.

2. Permit Conditions Relating to Sewerage are attached and made part of this permit.
3. Special Conditions **I-XVI** are attached and made part of this permit.

F. THE AUTHORITY GRANTED BY THIS PERMIT IS SUBJECT TO THE FOLLOWING FURTHER QUALIFICATIONS:

1. If there is a conflict between the application or its supporting documents and amendments and the attached conditions, the attached conditions shall apply.
2. Failure to comply with the rules and regulations of DEP or with the terms or conditions of this permit shall void the authority given to the permittee by the issuance of this permit.
3. This permit is issued pursuant to the Clean Streams Law Act of June 22, 1937, P.L. 1987, as amended 35 P.S. §691.1 *et seq.* Issuance of this permit shall not relieve the permittee of any responsibility under any other law.
4. This permit shall expire on **April 30, 2023**. The permittee shall submit an application to renew the permit no later than 180 days prior to the permit expiration date.

PERMIT ISSUED DATE: 4/11/18 BY: Sachin Shankar

PERMIT EFFECTIVE DATE: May 1, 2018 TITLE: for Clean Water Program Manager
Southeast Regional Office

pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WATER STANDARDS AND FACILITY REGULATION

SPECIAL CONDITIONS

Water Quality Management Permit No. 1507415

DELCORA
Corinne Village WWTP

I. Discharge Limitations and Monitoring Requirements

Effluent from the sewage treatment plant shall be sampled from the sample tap on the sand filter discharge pipe and shall be limited at all times as follows:

	Discharge Limitations (mg/l)			Monitoring Requirements	
Parameter	Average Monthly	Average Weekly	Instantaneous Maximum	Measurement Frequency	Sample Type
Influent Flow (mgd)	0.020			Continuous	Recorded
$CBOD_5$	25		50	2/Month	Grab
Suspended Solids	30		60	2/Month	Grab
pH	Within limits of 6.0 to 9.0 standard units at all times			Daily	Grab

Additional treatment requirements include the satisfactory disposal of sludge and the reduction of quantities of oils, greases, acids, alkalis, toxic, taste and odor producing substances, inimical to the public interest to levels which will not pollute the receiving waters.

Monitoring results shall be reported monthly on the Discharge Monitoring Report (DMR). The term "composite" sample means a combination of individual samples collected at regular intervals over a time period. The term "grab" sample means an individual sample collected in less than 15 minutes. Samples and measurements taken as required, herein, shall be representative of the volume and nature of the monitored discharge.

II. Copies of monthly Discharge Monitoring Reports must be submitted within 28 days of the end of the monitoring period to:

Department of Environmental Protection
Southeast Regional Office
Water Management
2 East Main Street
Norristown, PA 19401

III. Groundwater Monitoring Requirements

The permittee shall effectively monitor the quality of the groundwater. The parameters to be tested, and frequency of analysis and other monitoring requirements shall be as follows:

A. Quarterly analysis of groundwater sampled at groundwater monitoring wells MW-2, MW-4, MW-5, and MW-7 shall consist of: static water level, sampling depth, turbidity, pH, chloride, total phosphorus, ammonia nitrogen, nitrate nitrogen, nitrite nitrogen, total dissolved solids, fecal coliform, and alkalinity.

B. Groundwater elevations must be measured prior to purging the groundwater monitoring well.

C. Before collection of the groundwater sample, a groundwater monitoring well shall be properly purged and allowed to recover to at least 90 percent of the well volume that was present prior to purging.

D. All groundwater samples shall be collected from within the top five feet of the water elevation within the well column.

IV. Groundwater Monitoring Data Reporting Requirements

All groundwater data shall be submitted to DEP **annually** and be in **report form.** The report shall be due to DEP within 28 days of the end of your annual permit cycle. For example, if your permit was issued on March 4th, then your annual report is due by April 28th. The annual report shall be mailed under separate cover and addressed to:

Department of Environmental Protection
Southeast Regional Office
Clean Water Program
2 East Main Street
Norristown, PA 19401

Attention: Hydrogeologist
Planning Section

V. The annual groundwater monitoring report shall include the following information:

A. General Information

1. Facility name
2. Facility permit number
3. Facility location (including municipality and county)
4. Facility contact information:

   a. permittee name, address, and telephone number
   b. contact name and title
   c. facility operator name, address, and telephone number
   d. facility consultant name, address, and telephone number

B. Site Data

1. A brief narrative that provides the date and description of any facility event which may have impacted any part of the groundwater monitoring program. (e.g., collapse of groundwater monitoring well, etc.).

2. Average effluent flow for the year covered by the report.
3. In tabular form, the following information needs to be provided for at least the last 5 years of system operation:

    a. Date of sampling.
    b. Groundwater elevation.
    c. Sampling depth.
    d. Identification of upgradient and downgradient wells.
    e. The results of the analysis of the samples.

4. Background groundwater data generated prior to system start-up. This information is absolutely needed and needs to be included in the data tabulation.

C. Comprehensive Groundwater Evaluation (CGE)

As part of the facility's 5-year permit renewal application, the permittee shall submit a report that is a result of a comprehensive evaluation of the systems impact on groundwater. A Registered P.G. must identify any trends which may pose a threat to human health or certify that none are present. Should adverse impacts to groundwater be identified, the permittee needs to recommend actions to address the potential threat.

D. Groundwater Background Report

Within 60 days of system start up, or upon issuance of permit renewal a Groundwater Background Report shall be submitted to DEP. The report shall include the follow information:

1. Site Information

    a. Brief narrative, including site limitations.
    b. Soil type and bedrock lithology beneath the absorption areas.
    c. Site drawings showing general location of absorption fields and monitoring wells. Drawings must show site topography.

2. Construction details of each groundwater monitoring well shall include:

    a. Well depth.
    b. Casing depth.
    c. Static water levels.
    d. Surface elevation.
    e. Well log.
    f. Water bearing zones.
    g. Top of casing elevation.
    h. Ground surface elevation.

VI. Drip Dispersal Field Operation

A. Application of the effluent to drip dispersal fields shall be managed to prevent ponding, freezing, breakout, and run off. At no time may effluent be discharged to the ground surface.

B. The drip dispersal system area shall be inspected on a routine basis. System components including valves and piping shall be repaired/replaced immediately if any damage occurs.

C. The drip field vegetation shall consist of predominantly grass-like species to be mowed and maintained as needed to facilitate frequent inspection of the drip field components. At a minimum, mowing shall occur twice per year.

D. At no time shall any debris be stockpiled on the drip area.

E. The permittee shall maintain a daily log of total gallons discharged to each drip irrigation zone.

VII. Hydraulic Loading Requirements

The Hydraulic Loading Rate shall be limited at all times to 20,224 gpd on the 3.765 acres of disposal area. The hydraulic loadings for the drip zones are as follows:

Zone	Maximum Cycle Dose per Zone (Gallons)	Maximum Daily Dose per Zone (Gallons)
1	423	1,692
2	423	1,692
3	416	1,664
4	423	1,692
5	423	1,692
6	423	1,692
7	423	1,692
8	412	1,648
9	423	1,692
10	423	1,692
11	423	1,692
12	423	1,692

VIII. Unless, otherwise, specified in this permit, the test procedures for analysis of pollutants shall be those contained in 40 C.F.R. Part 136, or alternative test procedures approved pursuant to that Part. For the analysis of CBOD5, consult Section 507 of Standard Methods.

IX. If the permittee monitors any pollutant more frequently than the permit requires, the results of this monitoring shall be incorporated, as appropriate, into the calculations used to report self-monitoring data on the DMR.

X. The water level, within the impoundments, shall be controlled so that a freeboard of at least 24 inches is maintained at all times.

XI. The authorization to discharge contained in Section D of this permit shall expire in 5 years from the date of issuance, or reissuance. Application for renewal of this permit, or notification of intent to cease discharging by the expiration date, must be submitted to DEP at least 180 days prior to the above expiration date (unless permission has been granted by DEP for submission at a later date). In the event that a timely and complete application for renewal has been submitted and DEP is unable, through no fault of the permittee, to reissue the permit before the above expiration date, the terms and conditions of this permit will be automatically continued and will remain fully effective and enforceable pending the grant or denial of the application for permit renewal. The application for renewal shall be submitted on the appropriate Water Quality Management Part II Application forms and shall include a tabulated summary of all groundwater monitoring data for the previous 5 years, including a discussion of groundwater quality trends resulting from this discharge.

XII. Laboratory Certification

Facilities that test or analyze environmental samples used to demonstrate compliance with this permit shall be in compliance with laboratory accreditation requirements of act 90 of 2002 (27 Pa. Code C.S. §§ 4101-4113) and 25 Pa. Code Chapter 252, relating to environmental laboratory accreditation. An environmental laboratory is any facility engaged in the testing or analysis of environmental samples required by a statute administered by the Department relating to the protection of the environment or of public health, safety, and welfare.

XIII. Recordkeeping and Retention

The permittee shall keep records of operation and efficiency of the wastewater treatment facilities. All records of monitoring activities and results (including all original strip chart recordings for continuous monitoring instrumentation and calibration and maintenance records), copies of all reports required by this permit, and records of all data used to complete the application for this permit shall be retained by the permittee for three (3) years. The three-year period shall be extended as requested by the Department.

XIV. The facility shall be operated under the charge of a responsible operator(s) certified under the Pennsylvania Water and Wastewater Systems Operations Certification Act (Act 11). The operator(s) shall comply with the continuing education requirements required under the regulations and guidelines related to Act 11.

XV. Right of Entry

Pursuant to Sections 5(b) and 305 of Pennsylvania's Clean Stream Law, the permittee shall allow authorized representatives of Department of Environmental Protection upon the presentation of credentials and other documents as may be required by law:

A. To enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit.

B. To have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit.

C. To inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit.

D. To sample or monitor at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by the Clean Water Act or The Clean Streams Law, any substances or parameters at any location.

XVI. If there is a change in ownership of this facility or in permittee name, an application for transfer of permit must be submitted to DEP.

3800-FM-BCW0462 12/2016

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DEPARTMENT OF ENVIRONMENTAL PROTECTION

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF CLEAN WATER
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

PRIMARY FACILITY NAME/ADDRESS

NAME Corrine Village WWTF
CLIENT DELCORA
ADDRESS 100 East 5th Street
Chester, PA 19013
LOCATION Pocopson Township
Chester County
WATERSHED 3-H

1507415
PERMIT NUMBER

1507415
OUTFALL NUMBER

MONITORING PERIOD						
YEAR	MO	DAY	TO	YEAR	MO	DAY

Reporting Frequency: Monthly
DMR Effective From: Permit Effective Date
DMR Effective To: Permit Expiration Date
Permit Expires:
Permit Application Due:
___ Check Here if No Discharge
NOTE: Read Instructions before completing this form

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		VALUE	VALUE	UNITS	VALUE	VALUE	VALUE	UNITS			
Flow Raw Sewage Influent	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT	Report Avg Mo	XXX	MGD	XXX	XXX	XXX	XXX		Continuous	Recorded
pH	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT	XXX	XXX	XXX	6.0 Inst Min	XXX	9.0 IMAX	S.U.		1/day	Grab
Carbonaceous Biochemical Oxygen Demand (CBOD5)	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT	XXX	XXX	XXX	25.0 Avg Mo	XXX	XXX	mg/L		2/month	Grab
Total Suspended Solids	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT	XXX	XXX	XXX	30.0 Avg Mo	XXX	XXX	mg/L		2/month	Grab

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER	I certify under penalty of law that this document was prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations. See 18 Pa. C.S. § 4904 (relating to unsworn falsification).		TELEPHONE		DATE		
TYPED OR PRINTED		SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	AREA CODE	NUMBER	YEAR	MO	DAY

COMMENTS *(Report all violations on the "Non-Compliance Reporting Form")*

3800-FM-BPNPSM0189 3/2012

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

SUPPLEMENTAL LABORATORY ACCREDITATION FORM[1]

Permittee Name: DELCORA (Corinne Village Subdivision)

Address: 100 East 5th Street
Chester, PA 19013

PERMIT NUMBER	MONITORING PERIOD Year/Month/Day						
1507415				TO			

PARAMETER	ANALYSIS METHOD	LAB NAME	LAB ID NUMBER[2]

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

Name/Title Principal Executive Officer **Phone:** _____ **Signature of Principal Executive Officer or Authorized Agent**

_____ **Date:** _____ _____

[1] Submit this form with the first Discharge Monitoring Report (DMR) or Annual Report, where sample results are submitted to the Department for compliance purposes. You do not need to send this form to the Department again UNLESS there has been a change to the lab(s), parameter(s) or method(s) of analysis.

[2] For parameter(s) covered under accreditation-by-rule, submit the lab's registration number in lieu of an accreditation number.

3800-FM-BPNPSM0449 3/2012

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

SUPPLEMENTAL REPORT
LAND APPLICATION SYSTEMS

Facility Name: Corinne Village Subdivision
Municipality: Pocopson Township County: Chester
Watershed: 3-H

Month: _____ Year: _____
Permit No.: 1507415 Outfall No.: _____
This permit will expire on

Day	Zone: Acres: Gallons	Zone: Acres: Gallons	Zone: Acres: Gallons	Zone: Acres: Gallons	Zone: Acres: Gallons	Precipitation Inches	Precipitation Type	Average Temp °F	Ground Conditions (Wet, Dry, Frozen)
1									
2									
3									
4									
5									
6									
7									
8									
9									
10									
11									
12									
13									
14									
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21									
22									
23									
24									
25									
26									
27									
28									
29									
30									
31									
Totals:									

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

Prepared By: _____ Signature: _____

Title: _____ Date: _____

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

pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

INSTRUCTIONS FOR COMPLETING LAND APPLICATION SYSTEMS SUPPLEMENTAL REPORT

Use this form to document wastewater management activities for facilities with land application programs (e.g., surface or subsurface irrigation, drip irrigation, etc.) approved under a Water Quality Management (WQM) permit.

1. Enter Facility Name, Municipality, County, Watershed No., Month, Year, Permit No., Outfall No. (if applicable) and Permit Expiration Date (if applicable).

2. Next to each "Zone" heading (this may also be considered "land application site"), enter a unique identifier. For example, "1," "2," etc. or "Site 1," Site 2," etc. If the name of the zone or site is too long for the space provided, please use an abbreviation. Up to five zones can be accommodated on one report. If you have more than five zones, please use more sheets. Next to each "Acres" heading, enter the number of acres that receive effluent (e.g., "wettable acres").

3. Enter the daily volume (gallons) applied onto each zone.

4. Enter the average daily temperature at the land application site. An on-site temperature monitoring system is recommended, but other approaches may be acceptable, such as use of local airport data.

5. Enter the daily ground surface conditions (site-wide). Recommended entries include "dry," "wet," and "frozen," but others may be used.

6. Type the name of the person who prepared the form, the person's job title, and sign and date the form after reading the certification statement.

Permit No. 1507415

pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

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

PERMIT CONDITIONS RELATING TO SEWERAGE

For use in Water Quality Management Permits

(Check boxes that apply)

General

☐ 1. The Department of Environmental Protection (DEP) considers the licensed Professional Engineer whose seal is affixed to the design documents to be fully responsible for the adequacy of all aspects of the facility design.

☐ 2. The permittee shall adopt and enforce an ordinance requiring the abandonment of privies, cesspools or similar receptacles for human waste and onlot sewage disposal systems on the premises of occupied structures accessible to public sewers. All such structures must be connected to the public sewers.

☐ 3. The outfall sewer or drain shall be extended to the low water mark of the receiving body of water. Where necessary to ensure proper mixing and waste assimilation, an outfall sewer or drain may be extended with appurtenances below the low water mark and into the bed of a navigable stream provided that the permittee has secured an easement, right-of-way, license or lease from DEP in accordance with Section 15 of the Dam Safety and Encroachments Act, the Act of November 26, 1978, P.L. 1375, as amended.

☐ 4. The approval is specifically made contingent on the permittee acquiring all necessary property rights, by easement or otherwise, providing for the satisfactory construction, operation, maintenance and replacement of all sewers or sewerage structures in, along or across private property with full rights of ingress, egress and regress.

☐ 5. When construction of the approved sewerage facilities is completed and before they are placed in operation, the permittee shall notify DEP in writing so that a DEP representative may inspect the facilities.

☐ 6. The approval of the plans, and the authority granted in this permit, if not specifically extended, shall cease and be null and void 2 years from the issuance date of this permit unless construction or modification of the facilities covered by this permit has begun on or before the second anniversary of the permit date.

☒ 7. If, at any time, the sewerage facilities covered by this permit create a public nuisance, including but not limited to, causing malodors or causing environmental harm to waters of the Commonwealth, DEP may require the permittee to adopt appropriate remedial measures to abate the nuisance or harm.

☐ 8. If, after the issuance of this permit, DEP approves a municipal sewage facilities official plan or an amendment to an official plan under Act 537 (Pennsylvania Sewage Facilities Act, the Act of January 24, 1966, P.L. 1535 as amended) in which sewage from the herein approved facilities will be treated and disposed of at other planned facilities, the permittee shall, upon notification from the municipality or DEP, provide for the conveyance of its sewage to the planned facilities, abandon use and decommission the herein approved facilities including the proper disposal of solids, and notify DEP accordingly. The permittee shall adhere to schedules in the approved official plan, amendments to the plan, or other agreements between the permittee and municipality. This permit shall then, upon notice from DEP, terminate and become null and void and shall be relinquished to DEP.

☒ 9. This permit does not relieve the permittee of its obligations to comply with all federal, interstate, state or local laws, ordinances and regulations applicable to the sewerage facilities.

☒ 10. This permit does not give any real or personal property rights or grant any exclusive privileges, nor shall it be construed to grant or confirm any right, easement or interest in, on, to or over any lands which belong to the Commonwealth.

☐ 11. The authority granted by this permit is subject to all effluent requirements, monitoring requirements and other conditions as set forth in NPDES Permit No. _____ and all subsequent amendments and renewals. No discharge is authorized from these facilities unless approved by an NPDES Permit.

Construction

☐ 12. This permit is issued under the authorization of The Clean Streams Law and 25 Pa. Code Chapter 91. The permittee shall obtain all necessary permits, approvals and/or registrations under 25 Pa. Code Chapters 102, 105 and 106 prior to commencing construction of the facilities authorized by this permit, as applicable. The permittee should contact the DEP office that issued this permit if there are any questions concerning the applicability of additional permits.

☐ 13. The facilities shall be constructed under the supervision of a Pennsylvania licensed Professional Engineer in accordance with the approved reports, plans and specifications.

☐ 14. A Pennsylvania licensed Professional Engineer shall certify that construction of the permitted facilities was completed in accordance with the application and design plans submitted to DEP, using "Post Construction Certification" form (3800-PM-WSFR0179a). It is the permittee's responsibility to ensure that a Professional Engineer is on-site to provide the necessary oversight and/or inspections to certify the facilities. The certification must be submitted to DEP before the facility is placed in operation. As-built drawings, photographs (if available) and a description of all deviations from the application and design plans must be submitted to DEP within 30 days of certification.

☐ 15. Manhole inverts shall be formed to facilitate the flow of the sewage and to prevent the stranding of sewage solids. The manhole structure shall be built to prevent undue infiltration, entrance of street wash or grit and provide safe access to facilitate manhole maintenance activities.

☐ 16. The local Waterways Conservation Officer of the Pennsylvania Fish and Boat Commission (PFBC) shall be notified when the construction of any stream crossing and/or outfall is started and completed. A written permit must be secured from the PFBC if the use of explosives in any waterways is required and the permittee shall notify the local Waterways Conservation Officer when explosives are to be used.

Operation and Maintenance

☒ 17. The permittee shall maintain records of "as-built" plans showing all the treatment facilities as actually constructed together with facility operation and maintenance (O&M) manuals and any other relevant information that may be required. Upon request, the "as-built" plans and O&M manuals shall be filed with DEP.

☐ 18. The sewers shall have adequate foundation support as soil conditions require. Trenches shall be back-filled to ensure that sewers will have proper structural stability, with minimum settling and adequate protection against breakage. Concrete used in connection with these sewers shall be protected from damage by water, freezing, drying or other harmful conditions until cured.

☐ 19. Stormwater from roofs, foundation drains, basement drains or other sources shall not be admitted directly to the sanitary sewers.

☐ 20. The approved sewers shall be maintained in good condition, kept free of deposits by flushing or other cleaning methods and repaired when necessary.

☒ 21. The sewerage facilities shall be properly operated and maintained to perform as designed.

☒ 22. The attention of the permittee is called to the highly explosive nature of certain gases generated by the digestion of sewage solids when these gases are mixed in proper proportions with air and to the highly toxic character of certain gases arising from such digestion or from sewage in poorly ventilated compartments or sewers. Therefore, at all places throughout the sewerage facilities where hazard of fire, explosion or danger from toxic gases may occur, the permittee shall post conspicuous permanent and legible warnings. The permittee shall instruct all employees concerning the aforesaid hazards, first aid and emergency methods of meeting such hazards and shall make all necessary equipment and material accessible.

☒ 23. An operator certified in accordance with the Water and Wastewater Systems Operator Certification Act of February 21, 2002, 63 P.S. §§1001, *et seq.* shall operate the sewage treatment plant.

☐ 24. The permittee shall properly control any industrial waste discharged into its sewerage system by regulating the rate and quality of such discharge, requiring necessary pretreatment and excluding industrial waste, if necessary, to protect the integrity or operation of the permittee's sewerage system.

☐ 25. There shall be no physical connection between a public water supply system and a sewer or appurtenance to it which would permit the passage of any sewage or polluted water into the potable water supply. No water pipe shall pass through or come in contact with any part of a sewer manhole.

☐ 26. All connections to the approved sanitary sewers must be in accordance with the official Act 537 Plan and, if applicable, a corrective action plan as contained in the approved Title 25 Pa. Code Chapter 94 Municipal Wasteload Management Annual Report.

☒ 27. Collected screenings, slurries, sludge and other solids shall be handled and disposed of in compliance with Title 25 Pa. Code Chapters 271, 273, 275, 283 and 285 (related to permits and requirements for land filling, land application, incineration and storage of sewage sludge), Federal Regulations 40 CFR 257 and the Federal Clean Water Act and its amendments.

pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

November 20, 2015

CERTIFIED MAIL NO. 7001 2510 0006 1770 0397

Mr. Donald Franceschini
Manager
Spring Hill Farm WWTF Association
P.O. Box 756
Chadds Ford, PA 19317

Re: Final NPDES Permit - Sewage
Spring Hill Farm STP
NPDES Permit No. PA0052230
Authorization ID No. 1067798
Chadds Ford Township, Delaware County

Dear Mr. Franceschini:

Your NPDES permit is enclosed. Please read the permit carefully. The permit expires on the date identified on page 1 of the permit. A renewal application must be submitted to this office 180 days prior to the permit expiration date, if a discharge is expected to continue past the expiration date of the permit.

Enclosed are Discharge Monitoring Report (DMR) templates and DMR instructions. It is recommended that you retain the DMR templates in the event you are unable to submit DMRs electronically through DEP's eDMR system. Routine use of the eDMR system is a requirement of the permit unless the conditions in Part A III.B of the permit are met to withdraw from the eDMR system.

Also enclosed is a Supplemental Form Inventory, which identifies the forms that are attached to the permit and must be submitted as attachments to eDMR reports, as applicable (see individual form instructions). The submission of other supplemental forms may be required in accordance with the permit. We encourage you to use the spreadsheet versions of supplemental forms that contain appropriate validation and DEP-approved calculations.

Any person aggrieved by this action may appeal, pursuant to Section 4 of the Environmental Hearing Board Act, 35 P.S. Section 7514, and the Administrative Agency Law, 2 Pa.C.S. Chapter 5A, to the Environmental Hearing Board, Second Floor, Rachel Carson State Office Building, 400 Market Street, P.O. Box 8457, Harrisburg, PA 17105-8457, 717.787.3483. TDD users may contact the Board through the Pennsylvania Relay Service, 800.654.5984. Appeals must be filed with the Environmental Hearing Board within 30 days of receipt of written notice of this action unless the appropriate statute provides a different time period. Copies of the appeal form and the Board's rules of practice and procedure may be obtained from the Board. The appeal form and the Board's rules of practice and procedure are also available in braille or on

audiotape from the Secretary to the Board at 717.787.3483. This paragraph does not, in and of itself, create any right of appeal beyond that permitted by applicable statutes and decisional law.

IF YOU WANT TO CHALLENGE THIS ACTION, YOUR APPEAL MUST REACH THE BOARD WITHIN 30 DAYS. YOU DO NOT NEED A LAWYER TO FILE AN APPEAL WITH THE BOARD.

IMPORTANT LEGAL RIGHTS ARE AT STAKE, HOWEVER, SO YOU SHOULD SHOW THIS DOCUMENT TO A LAWYER AT ONCE. IF YOU CANNOT AFFORD A LAWYER, YOU MAY QUALIFY FOR FREE PRO BONO REPRESENTATION. CALL THE SECRETARY TO THE BOARD (717.787.3483) FOR MORE INFORMATION.

If you have any questions, please contact Sara Abraham at 484.250.5195.

Sincerely,

Jenifer L. Fields, P.E.
Environmental Program Manager
Clean Water Program

Enclosures

cc: Chadds Ford Township (w/o enclosure)
Concord Township (w/o enclosure)
Operations Section
Mr. Linahan-David V Linahan PE LLC
Mr. Kovach-DRBC
Ms. Lashley (w/o enclosure)
Central Office, Division of Operations, Monitoring and Data Systems
Re

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

pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

AUTHORIZATION TO DISCHARGE UNDER THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM DISCHARGE REQUIREMENTS FOR NON-MUNICIPAL SEWAGE TREATMENT WORKS

NPDES PERMIT NO: PA0052230

In compliance with the provisions of the Clean Water Act, 33 U.S.C. Section 1251 *et seq.* ("the Act") and Pennsylvania's Clean Streams Law, as amended, 35 P.S. Section 691.1 *et seq.*,

Spring Hill Farm WWTF Association
PO Box 756
Chadds Ford, PA 19317

is authorized to discharge from a facility known as **Spring Hill Farm STP**, located at **90 Springhill Drive, Chadds Ford Township, Delaware County**, to **Unnamed Tributary to Webb Creek** in Watershed(s) **3-G** in accordance with effluent limitations, monitoring requirements and other conditions set forth in Parts A, B and C hereof.

THIS PERMIT SHALL BECOME EFFECTIVE ON JANUARY 1, 2016

THIS PERMIT SHALL EXPIRE AT MIDNIGHT ON DECEMBER 31, 2020

The authority granted by this permit is subject to the following further qualifications:

1. If there is a conflict between the application, its supporting documents and/or amendments and the terms and conditions of this permit, the terms and conditions shall apply.

2. Failure to comply with the terms, conditions or effluent limitations of this permit is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application. (40 CFR 122.41(a))

3. A complete application for renewal of this permit, or notice of intent to cease discharging by the expiration date, must be submitted to DEP at least 180 days prior to the above expiration date (unless permission has been granted by DEP for submission at a later date), using the appropriate NPDES permit application form. (40 CFR 122.41(b), 122.21(d)(2))

   In the event that a timely and complete application for renewal has been submitted and DEP is unable, through no fault of the permittee, to reissue the permit before the above expiration date, the terms and conditions of this permit, including submission of the Discharge Monitoring Reports (DMRs), will be automatically continued and will remain fully effective and enforceable against the discharger until DEP takes final action on the pending permit application. (25 Pa. Code §§ 92a.7(b), (c))

4. This NPDES permit does not constitute authorization to construct or make modifications to wastewater treatment facilities necessary to meet the terms and conditions of this permit.

DATE PERMIT ISSUED November 20, 2015 **ISSUED BY**

Jenifer L. Fields, P.E.
Clean Water Program Manager
Southeast Regional Office

PART A - EFFLUENT LIMITATIONS, MONITORING, RECORDKEEPING AND REPORTING REQUIREMENTS

I. A. For Outfall 001 , **Latitude** 39° 51' 56.00" , **Longitude** 75° 32' 21.00" , **River Mile Index** 0.42 , **Stream Code** 00568
Receiving Waters: Unnamed Tributary to Webb Creek
Type of Effluent: Treated Sewage

1. The permittee is authorized to discharge during the period from Permit Effective Date through Permit Expiration Date.

2. Based on the anticipated wastewater characteristics and flows described in the permit application and its supporting documents and/or amendments, the following effluent limitations and monitoring requirements apply (see also Additional Requirements and Footnotes).

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day) [1]		Concentrations (mg/L)				Minimum [2] Measurement Frequency	Required Sample Type
	Average Monthly	Daily Maximum	Instant. Minimum	Average Monthly		Instant. Maximum		
Flow (MGD)	Report	Report	XXX	XXX	XXX	XXX	Continuous	Recorded
pH (S.U.)	XXX	XXX	6.0	XXX	XXX	9.0	1/day	Grab
Dissolved Oxygen	XXX	XXX	5.0	XXX	XXX	XXX	1/day	Grab
Total Residual Chlorine	XXX	XXX	XXX	0.06	XXX	0.14	1/day	Grab
CBOD5	21	XXX	XXX	25	XXX	50	1/week	24-Hr Composite
Total Suspended Solids	25	XXX	XXX	30	XXX	60	1/week	24-Hr Composite
Total Dissolved Solids	XXX	XXX	XXX	Report Daily Max	XXX	XXX	1/quarter	24-Hr Composite
Fecal Coliform (CFU/100 ml) May 1 - Sep 30	XXX	XXX	XXX	200	XXX	1,000	1/week	Grab
Fecal Coliform (CFU/100 ml) Oct 1 - Apr 30	XXX	XXX	XXX	200	XXX	1,000*	1/week	Grab

Outfall 001, Continued (from Permit Effective Date through Permit Expiration Date)

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day) [1]		Concentrations (mg/L)				Minimum [2] Measurement Frequency	Required Sample Type
	Average Monthly	Daily Maximum	Instant. Minimum	Average Monthly		Instant. Maximum		
Total Nitrogen	XXX	XXX	XXX	Report	XXX	XXX	1/week	24-Hr Composite
Ammonia-Nitrogen May 1 - Oct 31	1.7	XXX	XXX	2.0	XXX	4.0	1/week	24-Hr Composite
Ammonia-Nitrogen Nov 1 - Apr 30	5.0	XXX	XXX	6.0	XXX	12.0	1/week	24-Hr Composite
Total Phosphorus May 1 - Oct 31	0.8	XXX	XXX	1.0	XXX	2.0	1/week	24-Hr Composite
Total Phosphorus Nov 1 - Apr 30	1.7	XXX	XXX	2.0	XXX	4.0	1/week	24-Hr Composite
Total Copper	XXX	XXX	XXX	Report Daily Max	XXX	XXX	1/quarter	24-Hr Composite

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s): at Outfall 001

*Shall not exceed in more than 10% of samples. See Part C.I. Other Requirement No. H.

PART A - EFFLUENT LIMITATIONS, MONITORING, RECORDKEEPING AND REPORTING REQUIREMENTS (Continued)

Additional Requirements

1. The permittee may not discharge:

   a. Floating solids, scum, sheen or substances that result in observed deposits in the receiving water. (25 Pa Code § 92a.41(c))

   b. Oil and grease in amounts that cause a film or sheen upon or discoloration of the waters of this Commonwealth or adjoining shoreline, or that exceed 15 mg/l as a daily average or 30 mg/l at any time (or lesser amounts if specified in this permit). (25 Pa. Code § 92a.47(a)(7), § 95.2(2))

   c. Substances in concentration or amounts sufficient to be inimical or harmful to the water uses to be protected or to human, animal, plant or aquatic life. (25 Pa Code § 93.6(a))

   d. Foam or substances that produce an observed change in the color, taste, odor or turbidity of the receiving water, unless those conditions are otherwise controlled through effluent limitations or other requirements in this permit. (25 Pa Code § 92a.41(c))

2. If the permit requires the reporting of average weekly statistical results, the maximum weekly average concentration and maximum weekly average mass loading shall be reported, regardless of whether the results are obtained for the same or different weeks.

3. The permittee shall monitor the sewage effluent discharge(s) for the effluent parameters identified in the Part A limitations table(s) during all bypass events at the facility, using the sample types that are specified in the limitations table(s). Where the required sample type is "composite", the permittee must commence sample collection within one hour of the start of the bypass, wherever possible. The results shall be reported on the Daily Effluent Monitoring supplemental form (3800-FM-BPNPSM0435) and be incorporated into the calculations used to report self-monitoring data on Discharge Monitoring Reports (DMRs).

Footnotes

(1) When sampling to determine compliance with mass effluent limitations, the discharge flow at the time of sampling must be measured and recorded.

(2) This is the minimum number of sampling events required. Permittees are encouraged, and it may be advantageous in demonstrating compliance, to perform more than the minimum number of sampling events.

Supplemental Information

(1) The effluent limitations for Outfall 001 were determined using an effluent discharge rate of 0.1 MGD.

(2) Total Nitrogen is the sum of Total Kjeldahl-N (TKN) plus Nitrite-Nitrate as N (NO_2+NO_3-N), where TKN and NO_2+NO_3-N are measured in the same sample.

II. DEFINITIONS

At Outfall (XXX) means a sampling location in outfall line XXX below the last point at which wastes are added to outfall line (XXX), or where otherwise specified.

Average refers to the use of an arithmetic mean, unless otherwise specified in this permit. (40 CFR 122.41(l)(4)(iii))

Best Management Practices (BMPs) means schedules of activities, prohibitions of practices, maintenance procedures and other management practices to prevent or reduce the pollutant loading to surface waters of the Commonwealth. The term also includes treatment requirements, operating procedures and practices to control plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage. The term includes activities, facilities, measures, planning or procedures used to minimize accelerated erosion and sedimentation and manage stormwater to protect, maintain, reclaim, and restore the quality of waters and the existing and designated uses of waters within this Commonwealth before, during and after earth disturbance activities. (25 Pa. Code § 92a.2)

Bypass means the intentional diversion of waste streams from any portion of a treatment facility. (40 CFR 122.41(m)(1)(i))

Calendar Week is defined as the seven consecutive days from Sunday through Saturday, unless the permittee has been given permission by DEP to provide weekly data as Monday through Friday based on showing excellent performance of the facility and a history of compliance. In cases when the week falls in two separate months, the month with the most days in that week shall be the month for reporting.

Clean Water Act means the Federal Water Pollution Control Act, as amended. (33 U.S.C.A. §§ 1251 to 1387).

Composite Sample (for all except GC/MS volatile organic analysis) means a combination of individual samples (at least eight for a 24-hour period or four for an 8-hour period) of at least 100 milliliters (mL) each obtained at spaced time intervals during the compositing period. The composite must be flow-proportional; either the volume of each individual sample is proportional to discharge flow rates, or the sampling interval is proportional to the flow rates over the time period used to produce the composite. (EPA Form 2C)

Composite Sample (for GC/MS volatile organic analysis) consists of at least four aliquots or grab samples collected during the sampling event (not necessarily flow proportioned). The samples must be combined in the laboratory immediately before analysis and then one analysis is performed. (EPA Form 2C)

Daily Average Temperature means the average of all temperature measurements made, or the mean value plot of the record of a continuous automated temperature recording instrument, either during a calendar day or during the operating day if flows are of a shorter duration.

Daily Discharge means the discharge of a pollutant measured during a calendar day or any 24-hour period that reasonably represents the calendar day for purposes of sampling. For pollutants with limitations expressed in units of mass, the "daily discharge" is calculated as the total mass of the pollutant discharged over the day. For pollutants with limitations expressed in other units of measurement, the "daily discharge" is calculated as the average measurement of the pollutant over the day. (25 Pa. Code § 92a.2, 40 CFR 122.2)

Daily Maximum Discharge Limitation means the highest allowable "daily discharge."

Discharge Monitoring Report (DMR) means the DEP or EPA supplied form(s) for the reporting of self-monitoring results by the permittee. (25 Pa. Code § 92a.2, 40 CFR 122.2)

Estimated Flow means any method of liquid volume measurement based on a technical evaluation of the sources contributing to the discharge including, but not limited to, pump capabilities, water meters and batch discharge volumes.

Geometric Mean means the average of a set of n sample results given by the nth root of their product.

Grab Sample means an individual sample of at least 100 mL collected at a randomly selected time over a period not to exceed 15 minutes. (EPA Form 2C)

Hazardous Substance means any substance designated under 40 CFR Part 116 pursuant to Section 311 of the Clean Water Act. (40 CFR 122.2)

Hauled-In Wastes means any waste that is introduced into a treatment facility through any method other than a direct connection to the sewage collection system. The term includes wastes transported to and disposed of within the treatment facility or other entry points within the collection system.

Immersion Stabilization (i-s) means a calibrated device is immersed in the wastewater until the reading is stabilized.

Instantaneous Maximum Effluent Limitation means the highest allowable discharge of a concentration or mass of a substance at any one time as measured by a grab sample. (25 Pa. Code § 92a.2)

Measured Flow means any method of liquid volume measurement, the accuracy of which has been previously demonstrated in engineering practice, or for which a relationship to absolute volume has been obtained.

Monthly Average Discharge Limitation means the highest allowable average of "daily discharges" over a calendar month, calculated as the sum of all "daily discharges" measured during a calendar month divided by the number of "daily discharges" measured during that month. (25 Pa. Code § 92a.2)

Municipal Waste means garbage, refuse, industrial lunchroom or office waste and other material, including solid, liquid, semisolid or contained gaseous material resulting from operation of residential, municipal, commercial or institutional establishments and from community activities; and sludge not meeting the definition of residual or hazardous waste under this section from a municipal, commercial or institutional water supply treatment plant, waste water treatment plant or air pollution control facility. (25 Pa. Code § 271.1)

Residual Waste means garbage, refuse, other discarded material or other waste, including solid, liquid, semisolid or contained gaseous materials resulting from industrial, mining and agricultural operations and sludge from an industrial, mining or agricultural water supply treatment facility, wastewater treatment facility or air pollution control facility, if it is not hazardous. The term does not include coal refuse as defined in the Coal Refuse Disposal Control Act. The term does not include treatment sludges from coal mine drainage treatment plants, disposal of which is being carried on under and in compliance with a valid permit issued under the Clean Streams Law. (25 Pa Code § 287.1)

Severe Property Damage means substantial physical damage to property, damage to the treatment facilities that causes them to become inoperable, or substantial and permanent loss of natural resources that can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production. (40 CFR 122.41(m)(1)(ii))

Stormwater means the runoff from precipitation, snow melt runoff, and surface runoff and drainage. (25 Pa. Code § 92a.2)

Stormwater Associated With Industrial Activity means the discharge from any conveyance that is used for collecting and conveying stormwater and that is directly related to manufacturing, processing, or raw materials storage areas at an industrial plant, and as defined at 40 CFR §122.26(b)(14)(i) - (ix) and (xi) and 25 Pa. Code § 92a.2.

Total Dissolved Solids means the total dissolved (filterable) solids as determined by use of the method specified in 40 CFR Part 136.

Toxic Pollutant means those pollutants, or combinations of pollutants, including disease-causing agents, which after discharge and upon exposure, ingestion, inhalation or assimilation into any organism, either directly from the environment or indirectly by ingestion through food chains may, on the basis of information available to DEP cause death, disease, behavioral abnormalities, cancer, genetic mutations, physiological malfunctions,

including malfunctions in reproduction, or physical deformations in these organisms or their offspring. (25 Pa. Code § 92a.2)

III. SELF-MONITORING, REPORTING AND RECORDKEEPING

A. Representative Sampling

1. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity (40 CFR 122.41(j)(1)). Representative sampling includes the collection of samples, where possible, during periods of adverse weather, changes in treatment plant performance and changes in treatment plant loading. If possible, effluent samples must be collected where the effluent is well mixed near the center of the discharge conveyance and at the approximate mid-depth point, where the turbulence is at a maximum and the settlement of solids is minimized. (40 CFR 122.48, 25 Pa. Code § 92a.61)

2. Records Retention (40 CFR 122.41(j)(2))

   Except for records of monitoring information required by this permit related to the permittee's sludge use and disposal activities which shall be retained for a period of at least 5 years, all records of monitoring activities and results (including all original strip chart recordings for continuous monitoring instrumentation and calibration and maintenance records), copies of all reports required by this permit, and records of all data used to complete the application for this permit shall be retained by the permittee for 3 years from the date of the sample measurement, report or application. The 3-year period shall be extended as requested by DEP or the EPA Regional Administrator.

3. Recording of Results (40 CFR 122.41(j)(3))

   For each measurement or sample taken pursuant to the requirements of this permit, the permittee shall record the following information:

   a. The exact place, date and time of sampling or measurements.
   b. The person(s) who performed the sampling or measurements.
   c. The date(s) the analyses were performed.
   d. The person(s) who performed the analyses.
   e. The analytical techniques or methods used; and the associated detection level.
   f. The results of such analyses.

4. Test Procedures

   a. Facilities that test or analyze environmental samples used to demonstrate compliance with this permit shall be in compliance with laboratory accreditation requirements of Act 90 of 2002 (27 Pa. C.S. §§ 4101-4113) and 25 Pa. Code Chapter 252, relating to environmental laboratory accreditation.

   b. Test procedures (methods) for the analysis of pollutants or pollutant parameters shall be those approved under 40 CFR Part 136 or required under 40 CFR Chapter I, Subchapters N or O, unless the method is specified in this permit or has been otherwise approved in writing by DEP. (40 CFR 122.41(j)(4)), 122.44(i)(1)(iv))

   c. Test procedures (methods) for the analysis of pollutants or pollutant parameters shall be sufficiently sensitive. A method is sufficiently sensitive when 1) the method minimum level is at or below the level of the effluent limit established in the permit for the measured pollutant or pollutant parameter; or 2) the method has the lowest minimum level of the analytical methods approved under 40 CFR Part 136 or required under 40 CFR Chapter I, Subchapters N or O, for the measured pollutant or pollutant parameter; or 3) the method is specified in this permit or has been otherwise approved in writing by DEP for the measured pollutant or pollutant parameter. Permittees have the option of providing matrix or sample-specific minimum levels rather than the published levels. (40 CFR 122.44(i)(1)(iv))

5. Quality/Assurance/Control

In an effort to assure accurate self-monitoring analyses results:

a. The permittee, or its designated laboratory, shall participate in the periodic scheduled quality assurance inspections conducted by DEP and EPA. (40 CFR 122.41(e), 122.41(i)(3))

b. The permittee, or its designated laboratory, shall develop and implement a program to assure the quality and accurateness of the analyses performed to satisfy the requirements of this permit, in accordance with 40 CFR Part 136. (40 CFR 122.41(j)(4))

B. Reporting of Monitoring Results

1. The permittee shall effectively monitor the operation and efficiency of all wastewater treatment and control facilities, and the quantity and quality of the discharge(s) as specified in this permit. (40 CFR 122.41(e), 122.44(i)(1))

2. Discharge Monitoring Reports (DMRs) must be completed in accordance with DEP's published DMR Instructions (3800-FM-BPNPSM0463). DMRs are based on calendar reporting periods unless Part C of this permit requires otherwise. DMR(s) must be received by the agency(ies) specified in paragraph 3 below in accordance with the following schedule:

- Monthly DMRs must be received within 28 days following the end of each calendar month.

- Quarterly DMRs must be received within 28 days following the end of each calendar quarter, i.e., January 28, April 28, July 28, and October 28.

- Semiannual DMRs must be received within 28 days following the end of each calendar semiannual period, i.e., January 28 and July 28.

- Annual DMRs must be received by January 28, unless Part C of this permit requires otherwise.

3. The permittee shall complete all Supplemental Reporting forms (Supplemental DMRs) provided by DEP in this permit (or an approved equivalent), and submit the signed, completed forms as an attachment to the DMR(s). If the permittee elects to use DEP's electronic DMR (eDMR) system, one electronic submission may be made for DMRs and Supplemental DMRs. If paper forms are used, the completed forms shall be mailed to:

Department of Environmental Protection
Clean Water Program
2 East Main Street
Norristown, PA 19401

4. If the permittee elects to begin using DEP's eDMR system to submit DMRs required by the permit, the permittee shall, to assure continuity of business operations, continue using the eDMR system to submit all DMRs and Supplemental Reports required by the permit, unless the following steps are completed to discontinue use of eDMR:

a. The permittee shall submit written notification to the regional office that issued the permit that it intends to discontinue use of eDMR. The notification shall be signed by a principal executive officer or authorized agent of the permittee.

b. The permittee shall continue using eDMR until the permittee receives written notification from DEP's Central Office that the facility has been removed from the eDMR system, and electronic report submissions are no longer expected.

5. The completed DMR Form shall be signed and certified by either of the following applicable persons, as defined in 25 Pa. Code § 92a.22:

- For a corporation - by a principal executive officer of at least the level of vice president, or an authorized representative, if the representative is responsible for the overall operation of the facility from which the discharge described in the NPDES form originates.
- For a partnership or sole proprietorship - by a general partner or the proprietor, respectively.
- For a municipality, state, federal or other public agency - by a principal executive officer or ranking elected official.

If signed by a person other than the above, written notification of delegation of DMR signatory authority must be submitted to DEP in advance of or along with the relevant DMR form. (40 CFR 122.22(b))

6. If the permittee monitors any pollutant at monitoring points as designated by this permit, using analytical methods described in Part A III.A.4. herein, more frequently than the permit requires, the results of this monitoring shall be incorporated, as appropriate, into the calculations used to report self-monitoring data on the DMR. (40 CFR 122.41(l)(4)(ii))

C. Reporting Requirements

1. Planned Changes to Physical Facilities – The permittee shall give notice to DEP as soon as possible but no later than 30 days prior to planned physical alterations or additions to the permitted facility. A permit under 25 Pa. Code Chapter 91 may be required for these situations prior to implementing the planned changes. A permit application, or other written submission to DEP, can be used to satisfy the notification requirements of this section.

   Notice is required when:

   a. The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in 40 CFR 122.29(b). (40 CFR 122.41(l)(1)(i))

   b. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants which are not subject to effluent limitations in this permit. (40 CFR 122.41(l)(1)(ii))

   c. The alteration or addition results in a significant change in the permittee's sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan. (40 CFR 122.41(l)(1)(iii))

   d. The planned change may result in noncompliance with permit requirements. (40 CFR 122.41(l)(2))

2. Planned Changes to Waste Stream – Under the authority of 25 Pa. Code § 92a.24(a), the permittee shall provide notice to DEP as soon as possible but no later than 45 days prior to any planned changes in the volume or pollutant concentration of its influent waste stream as a result of indirect discharges or hauled-in wastes, as specified in paragraphs 2.a. and 2.b., below. Notice shall be provided on the "Planned Changes to Waste Stream" Supplemental Report (3800-FM-BPNPSM0482), available on DEP's website. The permittee shall provide information on the quality and quantity of waste introduced into the facility, and any anticipated impact of the change on the quantity or quality of effluent to be discharged from the facility. The Report shall be sent via Certified Mail or other means to confirm DEP's receipt of the notification. DEP will determine if the submission of a new application and receipt of a new or amended permit is required.

   a. Introduction of New Pollutants (25 Pa. Code § 92a.24(a))

      New pollutants are defined as parameters that meet all of the following criteria:

      (i) Were not detected in the facilities' influent waste stream as reported in the permit application; and

(ii) Have not been approved to be included in the permittee's influent waste stream by DEP in writing.

The permittee shall provide notification of the introduction of new pollutants in accordance with paragraph 2 above. The permittee may not authorize the introduction of new pollutants until the permittee receives DEP's written approval.

b. Increased Loading of Approved Pollutants (25 Pa. Code § 92a.24(a))

Approved pollutants are defined as parameters that meet one or more of the following criteria:

(i) Were detected in the facilities' influent waste stream as reported in the permittee's permit application; or

(ii) Have been approved to be included in the permittee's influent waste stream by DEP in writing; or

(iii) Have an effluent limitation or monitoring requirement in this permit.

The permittee shall provide notification of the introduction of increased influent loading (lbs/day) of approved pollutants in accordance with paragraph 2 above when (1) the cumulative increase in influent loading (lbs/day) exceeds 20% of the maximum loading reported in the permit application, or a loading previously approved by DEP, or (2) may cause an exceedance in the effluent of Effluent Limitation Guidelines (ELGs) or limitations in Part A of this permit, or (3) may cause interference or pass through at the facility, or (4) may cause exceedances of the applicable water quality standards in the receiving stream. Unless specified otherwise in this permit, if DEP does not respond to the notification within 30 days of its receipt, the permittee may proceed with the increase in loading. The acceptance of increased loading of approved pollutants may not result in an exceedance of ELGs or effluent limitations and may not cause exceedances of the applicable water quality standards in the receiving stream.

3. Reporting Requirements for Hauled-In Wastes

a. Receipt of Residual Waste

(i) The permittee shall document the receipt of all hauled-in residual wastes (including but not limited to wastewater from oil and gas wells, food processing waste, and landfill leachate), as defined at 25 Pa. Code § 287.1, that are received for processing at the treatment facility. The permittee shall report hauled-in residual wastes on a monthly basis to DEP on the "Hauled In Residual Wastes" Supplemental Report (3800-FM-BPNPSM0450) as an attachment to the DMR. If no residual wastes were received during a month, submission of the Supplemental Report is not required.

The following information is required by the Supplemental Report. The information used to develop the Report shall be retained by the permittee for five years from the date of receipt and must be made available to DEP or EPA upon request.

(1) The dates that residual wastes were received.

(2) The volume (gallons) of wastes received.

(3) The license plate number of the vehicle transporting the waste to the treatment facility.

(4) The permit number(s) of the well(s) where residual wastes were generated, if applicable.

(5) The name and address of the generator of the residual wastes.

(6) The type of wastewater.

The transporter of residual waste must maintain these and other records as part of the daily operational record (25 Pa. Code § 299.219). If the transporter is unable to provide this information or the permittee has not otherwise received the information from the generator, the residual wastes shall not be accepted by the permittee until such time as the permittee receives such information from the transporter or generator.

(ii) The following conditions apply to the characterization of residual wastes received by the permittee:

(1) If the generator is required to complete a chemical analysis of residual wastes in accordance with 25 Pa. Code § 287.51, the permittee must receive and maintain on file a chemical analysis of the residual wastes it receives. The chemical analysis must conform to the Bureau of Waste Management's Form 26R except as noted in paragraph (2), below. Each load of residual waste received must be covered by a chemical analysis if the generator is required to complete it.

(2) For wastewater generated from hydraulic fracturing operations ("frac wastewater") within the first 30 production days of a well site, the chemical analysis may be a general frac wastewater characterization approved by DEP. Thereafter, the chemical analysis must be waste-specific and be reported on the Form 26R.

b. Receipt of Municipal Waste

(i) The permittee shall document the receipt of all hauled-in municipal wastes (including but not limited to septage and liquid sewage sludge), as defined at 25 Pa. Code § 271.1, that are received for processing at the treatment facility. The permittee shall report hauled-in municipal wastes on a monthly basis to DEP on the "Hauled In Municipal Wastes" Supplemental Report (3800-FM-BPNPSM0437) as an attachment to the DMR. If no municipal wastes were received during a month, submission of the Supplemental Report is not required.

The following information is required by the Supplemental Report:

(1) The dates that municipal wastes were received.

(2) The volume (gallons) of wastes received.

(3) The BOD_5 concentration (mg/l) and load (lbs) for the wastes received.

(4) The location(s) where wastes were disposed of within the treatment facility.

(ii) Sampling and analysis of hauled-in municipal wastes must be completed to characterize the organic strength of the wastes, unless composite sampling of influent wastewater is performed at a location downstream of the point of entry for the wastes.

4. Unanticipated Noncompliance or Potential Pollution Reporting

a. Immediate Reporting - The permittee shall immediately report any incident causing or threatening pollution in accordance with the requirements of 25 Pa. Code §§ 91.33 and 92a.41(b).

(i) If, because of an accident, other activity or incident a toxic substance or another substance which would endanger users downstream from the discharge, or would otherwise result in pollution or create a danger of pollution or would damage property, the permittee shall immediately notify DEP by telephone of the location and nature of the danger. Oral notification to the Department is required as soon as possible, but no later than 4 hours after the permittee becomes aware of the incident causing or threatening pollution.

(ii) If reasonably possible to do so, the permittee shall immediately notify downstream users of the waters of the Commonwealth to which the substance was discharged. Such notice shall include the location and nature of the danger.

(iii) The permittee shall immediately take or cause to be taken steps necessary to prevent injury to property and downstream users of the waters from pollution or a danger of pollution and, in addition, within 15 days from the incident, shall remove the residual substances contained thereon or therein from the ground and from the affected waters of this Commonwealth to the extent required by applicable law.

b. The permittee shall report any noncompliance which may endanger health or the environment in accordance with the requirements of 40 CFR 122.41(l)(6). These requirements include the following obligations:

(i) 24 Hour Reporting - The permittee shall orally report any noncompliance with this permit which may endanger health or the environment within 24 hours from the time the permittee becomes aware of the circumstances. The following shall be included as information which must be reported within 24 hours under this paragraph:

(1) Any unanticipated bypass which exceeds any effluent limitation in the permit;

(2) Any upset which exceeds any effluent limitation in the permit; and

(3) Violation of the maximum daily discharge limitation for any of the pollutants listed in the permit as being subject to the 24-hour reporting requirement. (40 CFR 122.44(g))

(ii) Written Report - A written submission shall also be provided within 5 days of the time the permittee becomes aware of any noncompliance which may endanger health or the environment. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.

(iii) Waiver of Written Report - DEP may waive the written report on a case-by-case basis if the associated oral report has been received within 24 hours from the time the permittee becomes aware of the circumstances which may endanger health or the environment. Unless such a waiver is expressly granted by DEP, the permittee shall submit a written report in accordance with this paragraph. (40 CFR 122.41(l)(6)(iii))

5. Other Noncompliance

The permittee shall report all instances of noncompliance not reported under paragraph C.4 of this section or specific requirements of compliance schedules, at the time DMRs are submitted, on the Non-Compliance Reporting Form (3800-FM-BPNPSM0440). The reports shall contain the information listed in paragraph C.4.b.(ii) of this section. (40 CFR 122.41(l)(7))

PART B

I. MANAGEMENT REQUIREMENTS

A. Compliance

1. The permittee shall comply with all conditions of this permit. If a compliance schedule has been established in this permit, the permittee shall achieve compliance with the terms and conditions of this permit within the time frames specified in this permit. (40 CFR 122.41(a)(1))

2. The permittee shall submit reports of compliance or noncompliance, or progress reports as applicable, for any interim and final requirements contained in this permit. Such reports shall be submitted no later than 14 days following the applicable schedule date or compliance deadline. (25 Pa. Code § 92a.51(c), 40 CFR 122.47(a)(4))

B. Permit Modification, Termination, or Revocation and Reissuance

1. This permit may be modified, terminated, or revoked and reissued during its term in accordance with Title 25 Pa. Code § 92a.72 and 40 CFR 122.41(f).

2. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance, does not stay any permit condition. (40 CFR 122.41(f))

3. In the absence of DEP action to modify or revoke and reissue this permit, the permittee shall comply with effluent standards or prohibitions established under Section 307(a) of the Clean Water Act for toxic pollutants within the time specified in the regulations that establish those standards or prohibitions. (40 CFR 122.41(a)(1))

C. Duty to Provide Information

1. The permittee shall furnish to DEP, within a reasonable time, any information which DEP may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. (40 CFR 122.41(h))

2. The permittee shall furnish to DEP, upon request, copies of records required to be kept by this permit. (40 CFR 122.41(h))

3. Other Information - Where the permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to DEP, it shall promptly submit the correct and complete facts or information. (40 CFR 122.41(l)(8))

4. If the sewage treatment facility provides service in part or whole to a municipality, through a contract or agreement between the operator and municipality, an annual report shall be submitted to DEP by March 31 containing the following information, at a minimum:

   a. The information identified in 25 Pa. Code § 94.12.

   b. A "Solids Management Inventory" if specified in Part C of this permit.

   c. The total volume of hauled-in residual and municipal wastes received during the year, by source.

D. General Pretreatment Requirements

Where pollutants contributed by indirect dischargers result in interference or pass through, and a violation is likely to recur, the permittee shall develop and enforce specific limits for indirect dischargers and other users, as appropriate, that together with appropriate facility or operational changes, are necessary to

ensure renewed or continued compliance with this permit or sludge use or disposal practices. The permittee shall submit a copy of such limits to DEP when developed. (25 Pa. Code § 92a.47(d))

E. Proper Operation and Maintenance

1. The permittee shall employ operators certified in compliance with the Water and Wastewater Systems Operators Certification Act (63 P.S. §§ 1001-1015.1).

2. The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the terms and conditions of this permit. Proper operation and maintenance includes, but is not limited to, adequate laboratory controls including appropriate quality assurance procedures. This provision also includes the operation of backup or auxiliary facilities or similar systems that are installed by the permittee, only when necessary to achieve compliance with the terms and conditions of this permit. (40 CFR 122.41(e))

F. Duty to Mitigate

The permittee shall take all reasonable steps to minimize or prevent any discharge, sludge use or disposal in violation of this permit that has a reasonable likelihood of adversely affecting human health or the environment. (40 CFR 122.41(d))

G. Bypassing

1. Bypassing Not Exceeding Permit Limitations - The permittee may allow a bypass to occur which does not cause effluent limitations to be exceeded, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions in paragraphs two, three and four of this section. (40 CFR 122.41(m)(2))

2. Other Bypassing - In all other situations, bypassing is prohibited and DEP may take enforcement action against the permittee for bypass unless:

   a. A bypass is unavoidable to prevent loss of life, personal injury or "severe property damage." (40 CFR 122.41(m)(4)(i)(A))

   b. There are no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate backup equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance. (40 CFR 122.41(m)(4)(i)(B))

   c. The permittee submitted the necessary notice required in G.4.a. and b. below. (40 CFR 122.41(m)(4)(i)(C))

3. DEP may approve an anticipated bypass, after considering its adverse effects, if DEP determines that it will meet the conditions listed in G.2. above. (40 CFR 122.41(m)(4)(ii))

4. Notice

   a. Anticipated Bypass – If the permittee knows in advance of the need for a bypass, it shall submit prior notice, if possible, at least 10 days before the bypass. (40 CFR 122.41(m)(3)(i))

   b. Unanticipated Bypass – The permittee shall submit oral notice of any other unanticipated bypass within 24 hours, regardless of whether the bypass may endanger health or the environment or whether the bypass exceeds effluent limitations. The notice shall be in accordance with Part A III.C.4.b.

H. Sanitary Sewer Overflows (SSOs)

An SSO is an overflow of wastewater, or other untreated discharge from a separate sanitary sewer system (which is not a combined sewer system), which results from a flow in excess of the carrying capacity of the system or from some other cause prior to reaching the headworks of the sewage treatment facility. SSOs are not authorized under this permit. The permittee shall immediately report any SSO to DEP in accordance with Part A III.C.4 of this permit.

II. PENALTIES AND LIABILITY

A. Violations of Permit Conditions

Any person violating Sections 301, 302, 306, 307, 308, 318 or 405 of the Clean Water Act or any permit condition or limitation implementing such sections in a permit issued under Section 402 of the Act is subject to civil, administrative and/or criminal penalties as set forth in 40 CFR §122.41(a)(2).

Any person or municipality, who violates any provision of this permit; any rule, regulation or order of DEP; or any condition or limitation of any permit issued pursuant to the Clean Streams Law, is subject to criminal and/or civil penalties as set forth in Sections 602, 603 and 605 of the Clean Streams Law.

B. Falsifying Information

Any person who does any of the following:

- Falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under this permit, or

- Knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit (including monitoring reports or reports of compliance or noncompliance)

Shall, upon conviction, be punished by a fine and/or imprisonment as set forth in 18 Pa.C.S.A § 4904 and 40 CFR 122.41(j)(5) and (k)(2).

C. Liability

Nothing in this permit shall be construed to relieve the permittee from civil or criminal penalties for noncompliance pursuant to Section 309 of the Clean Water Act or Sections 602, 603 or 605 of the Clean Streams Law.

Nothing in this permit shall be construed to preclude the institution of any legal action or to relieve the permittee from any responsibilities, liabilities or penalties to which the permittee is or may be subject to under the Clean Water Act and the Clean Streams Law.

D. Need to Halt or Reduce Activity Not a Defense

It shall not be a defense for the permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit. (40 CFR 122.41(c))

III. OTHER RESPONSIBILITIES

A. Right of Entry

Pursuant to Sections 5(b) and 305 of Pennsylvania's Clean Streams Law, and Title 25 Pa. Code Chapter 92a and 40 CFR 122.41(i), the permittee shall allow authorized representatives of DEP and EPA, upon the presentation of credentials and other documents as may be required by law:

1. To enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit; (40 CFR 122.41(i)(1))

2. To have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit; (40 CFR 122.41(i)(2))

3. To inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices or operations regulated or required under this permit; and (40 CFR 122.41(i)(3))

4. To sample or monitor at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by the Clean Water Act or the Clean Streams Law, any substances or parameters at any location. (40 CFR 122.41(i)(4))

B. Transfer of Permits

1. Transfers by modification. Except as provided in paragraph 2 of this section, a permit may be transferred by the permittee to a new owner or operator only if this permit has been modified or revoked and reissued, or a minor modification made to identify the new permittee and incorporate such other requirements as may be necessary under the Clean Water Act. (40 CFR 122.61(a))

2. Automatic transfers. As an alternative to transfers under paragraph 1 of this section, any NPDES permit may be automatically transferred to a new permittee if:

   a. The current permittee notifies DEP at least 30 days in advance of the proposed transfer date in paragraph 2.b. of this section; (40 CFR 122.61(b)(1))

   b. The notice includes the appropriate DEP transfer form signed by the existing and new permittees containing a specific date for transfer of permit responsibility, coverage and liability between them; and (40 CFR 122.61(b)(2))

   c. DEP does not notify the existing permittee and the proposed new permittee of its intent to modify or revoke and reissue this permit, the transfer is effective on the date specified in the agreement mentioned in paragraph 2.b. of this section. (40 CFR 122.61(b)(3))

   d. The new permittee is in compliance with existing DEP issued permits, regulations, orders and schedules of compliance, or has demonstrated that any noncompliance with the existing permits has been resolved by an appropriate compliance action or by the terms and conditions of the permit (including compliance schedules set forth in the permit), consistent with 25 Pa. Code § 92a.51 (relating to schedules of compliance) and other appropriate DEP regulations. (25 Pa. Code § 92a.71)

3. In the event DEP does not approve transfer of this permit, the new owner or operator must submit a new permit application.

C. Property Rights

The issuance of this permit does not convey any property rights of any sort, or any exclusive privilege. (40 CFR 122.41(g))

D. Duty to Reapply

If the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the permittee must apply for a new permit. (40 CFR 122.41(b))

E. Other Laws

The issuance of this permit does not authorize any injury to persons or property or invasion of other private rights, or any infringement of state or local law or regulations.

IV. ANNUAL FEE

Permittees shall pay an annual fee in accordance with 25 Pa. Code § 92a.62. Annual fee amounts are specified in the following schedule and are due on each anniversary of the effective date of the most recent new or reissued permit. All flows identified in the schedule are annual average design flows. (25 Pa. Code § 92a.62)

Small Flow Treatment Facility (SRSTP or SFTF)	$0
Minor Sewage Facility < 0.05 MGD (million gallons per day)	$250
Minor Sewage Facility ≥ 0.05 and < 1 MGD	$500
Minor Sewage Facility with CSO (Combined Sewer Overflow)	$750
Major Sewage Facility ≥ 1 and < 5 MGD	$1,250
Major Sewage Facility ≥ 5 MGD	$2,500
Major Sewage Facility with CSO	$5,000

As of the effective date of this permit, the facility covered by the permit is classified in the following fee category: **Minor Sewage Facility >=0.05 and <1 MGD**.

Invoices for annual fees will be mailed to permittees approximately three months prior to the due date. In the event that an invoice is not received, the permittee is nonetheless responsible for payment. Throughout a five year permit term, permittees will pay four annual fees followed by a permit renewal application fee in the last year of permit coverage. Permittees may contact the DEP at 717-787-6744 with questions related to annual fees. The fees identified above are subject to change in accordance with 25 Pa. Code § 92a.62(e).

Payment for annual fees shall be remitted to DEP at the address below by the anniversary date. Checks should be made payable to the Commonwealth of Pennsylvania.

PA Department of Environmental Protection
Bureau of Point and Non-Point Source Management
Re: Chapter 92a Annual Fee
P.O. Box 8466
Harrisburg, PA 17105-8466

PART C

I. OTHER REQUIREMENTS

A. No storm water from pavements, area ways, roofs, foundation drains or other sources shall be directly admitted to the sanitary sewers associated with the herein approved discharge.

B. The approval herein given is specifically made contingent upon the permittee acquiring all necessary property rights by easement or otherwise, providing for the satisfactory construction, operation, maintenance or replacement of all sewers or sewerage structures associated with the herein approved discharge in, along, or across private property, with full rights of ingress, egress and regress.

C. Collected screenings, slurries, sludges, and other solids shall be handled and disposed of in compliance with 25 Pa. Code, Chapters 75, and in a manner equivalent to the requirements indicated in Chapters 271, 273, 275, 283, and 285 (related to permits and requirements for landfilling, land application, incineration, and storage of sewage sludge), Federal Regulation 40 CFR 257, Pennsylvania Clean Streams Law, Pennsylvania Solid Waste Management Act of 1980, and the Federal Clean Water Act and its amendments. The permittee is responsible to obtain or assure that contracted agents have all necessary permits and approvals for the handling, storage, transport, and disposal of solid waste materials generated as a result of wastewater treatment.

D. If, after the issuance of this permit, DEP approves a municipal sewage facilities official plan or an amendment to an official plan under Act 537 (Pennsylvania Sewage Facilities Act, the Act of January 24, 1966, P.L. 1535 as amended) in which sewage from the herein approved facilities will be treated and disposed of at other planned facilities, the permittee shall, upon notification from the municipality or DEP, provide for the conveyance of its sewage to the planned facilities, abandon use and decommission the herein approved facilities including the proper disposal of solids, and notify DEP accordingly. The permittee shall adhere to schedules in the approved official plan, amendments to the plan, or other agreements between the permittee and municipality. This permit shall then, upon notice from DEP, terminate and become null and void and shall be relinquished to DEP.

E. The permittee shall optimize chlorine dosages used for disinfection or other purposes to minimize the concentration of Total Residual Chlorine (TRC) in the effluent, meet applicable effluent limitations, and reduce the possibility of adversely affecting the receiving waters. Optimization efforts may include an evaluation of wastewater characteristics, mixing characteristics, and contact times, adjustments to process controls, and maintenance of the disinfection facilities. If DEP determines that effluent TRC is causing adverse water quality impacts, DEP may reopen this permit to apply new or more stringent effluent limitations and/or require implementation of control measures or operational practices to eliminate such impacts.

Where the permittee does not use chlorine for primary or backup disinfection, but proposes the use of chlorine for cleaning or other purposes, the permittee shall notify DEP prior to initiating use of chlorine and monitor TRC concentrations in the effluent on each day in which chlorine is used. The results shall be submitted as an attachment to the DMR.

F. The attention of the permittee is directed to the fact that effluent is discharged to a location with little or no assimilative capacity or dilution during critical periods. If the effluent creates a health hazard or nuisance, the permittee shall, upon notice from DEP, provide such additional treatment as may be required by DEP.

G. Notification of the designation of the responsible operator must be submitted to the permitting agency by the permittee within 60 days after the effective date of the permit and from time to time thereafter as the operator is replaced.

H. The seasonal effluent limitations for fecal coliform are based on Chapter 92a (§ 92a.47(4) & (5)) of DEP's regulations and Delaware River Basin Commission's (DRBC's) Water Quality Regulations at § 4.30.4.A. DEP's regulations govern the summer limits for fecal coliform while the winter limits are based on DRBC's regulations. The DRBC regulations state that during winter season from October through April, the instantaneous maximum concentration of fecal coliform organisms shall not be greater than 1,000 per 100

milliliters in more than 10 percent of the samples tested. For reporting purposes, a copy of the guidelines on the 10 percent rule is enclosed with the permit.

I. The DEP may identify and require certain discharge specific data to be submitted before the expiration date of this permit. Upon notification by the DEP, the permittee will have 12 months from the date of the notice to provide the required data. These data, along with any other data available to the DEP, will be used in completing the Watershed TMDL/WLA Analysis and in establishing discharge effluent limits. In the event that DEP requires the submission of data pursuant to this condition, the permittee shall have the right to appeal or otherwise contest the requirement.

3800-FM-BPNPSM0462 3/2012

pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF POINT AND NON-POINT SOURCE MANAGEMENT
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

PERMITTEE NAME/ADDRESS

NAME: Springhill Farm STP
CLIENT: Spring Hill Farm WWTF Association
ADDRESS: PO Box 756
Chadds Ford, PA 19317
LOCATION: Chadds Ford Township
Delaware County
WATERSHED: 3-G

PA0052230	001
PERMIT NUMBER	OUTFALL NUMBER

MONITORING PERIOD						
YEAR	MO	DAY	TO	YEAR	MO	DAY

Reporting Frequency: Monthly
DMR Effective From: January 1, 2016
DMR Effective To: December 31, 2020
Permit Expires: December 31, 2020
Permit Application Due: July 4, 2020

___ Check Here if No Discharge

NOTE: Read Instructions before completing this form

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		VALUE	VALUE	UNITS	VALUE	VALUE	VALUE	UNITS			
Flow	SAMPLE MEASUREMENT			MGD	*****	*****	*****	*****			
	PERMIT REQUIREMENT	Report Avg Mo	Report Daily Max		*****	*****	*****			Continuous	Recorded
pH	SAMPLE MEASUREMENT	*****	*****	*****		*****		S.U.			
	PERMIT REQUIREMENT	*****	*****		6.0 Inst Min	*****	9.0 IMAX			1/day	Grab
Dissolved Oxygen	SAMPLE MEASUREMENT	*****	*****	*****		*****	*****	mg/L			
	PERMIT REQUIREMENT	*****	*****		5.0 Inst Min	*****	*****			1/day	Grab
Total Residual Chlorine	SAMPLE MEASUREMENT	*****	*****	*****	*****			mg/L			
	PERMIT REQUIREMENT	*****	*****		*****	0.06 Avg Mo	0.14 IMAX			1/day	Grab
CBOD5	SAMPLE MEASUREMENT		*****	lbs/day	*****		*****	mg/L			
	PERMIT REQUIREMENT	21 Avg Mo	*****		*****	25 Avg Mo	*****			1/week	24-Hr Composite
Total Suspended Solids	SAMPLE MEASUREMENT		*****	lbs/day	*****		*****	mg/L			
	PERMIT REQUIREMENT	25 Avg Mo	*****		*****	30 Avg Mo	*****			1/week	24-Hr Composite
Fecal Coliform May 1 - Sep 30	SAMPLE MEASUREMENT	*****	*****	*****	*****			CFU/ 100 ml			
	PERMIT REQUIREMENT	*****	*****		*****	200 Avg Mo	1,000 IMAX			1/week	Grab

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER			TELEPHONE		DATE		
	I certify under penalty of law that this document was prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations. See 18 Pa. C.S. § 4904 (relating to unsworn falsification).					
TYPED OR PRINTED		SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	AREA CODE	NUMBER	YEAR	MO	DAY

COMMENTS *(Report all violations on the "Non-Compliance Reporting Form")*

3800-FM-BPNPSM0462 3/2012

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DEPARTMENT OF ENVIRONMENTAL PROTECTION

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF POINT AND NON-POINT SOURCE MANAGEMENT
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

PERMITTEE NAME/ADDRESS

NAME: Springhill Farm STP
CLIENT: Spring Hill Farm WWTF Association
ADDRESS: PO Box 756
Chadds Ford, PA 19317
LOCATION: Chadds Ford Township
Delaware County
WATERSHED: 3-G

PA0052230	001
PERMIT NUMBER	OUTFALL NUMBER

MONITORING PERIOD						
YEAR	MO	DAY	TO	YEAR	MO	DAY

Reporting Frequency: Monthly
DMR Effective From: January 1, 2016
DMR Effective To: December 31, 2020
Permit Expires: December 31, 2020
Permit Application Due: July 4, 2020

___ Check Here if No Discharge

NOTE: Read Instructions before completing this form

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		VALUE	VALUE	UNITS	VALUE	VALUE	VALUE	UNITS			
Fecal Coliform Oct 1 - Apr 30	SAMPLE MEASUREMENT	*****	*****	*****	*****			CFU/ 100 ml			
	PERMIT REQUIREMENT	*****	*****		*****	200 Avg Mo	1,000* IMAX			1/week	Grab
Total Nitrogen	SAMPLE MEASUREMENT	*****	*****	*****	*****		*****	mg/L			
	PERMIT REQUIREMENT	*****	*****		*****	Report Avg Mo	*****			1/week	24-Hr Composite
Ammonia-Nitrogen May 1 - Oct 31	SAMPLE MEASUREMENT		*****	lbs/day	*****		*****	mg/L			
	PERMIT REQUIREMENT	1.7 Avg Mo	*****		*****	2.0 Avg Mo	*****			1/week	24-Hr Composite
Ammonia-Nitrogen Nov 1 - Apr 30	SAMPLE MEASUREMENT		*****	lbs/day	*****		*****	mg/L			
	PERMIT REQUIREMENT	5.0 Avg Mo	*****		*****	6.0 Avg Mo	*****			1/week	24-Hr Composite
Total Phosphorus May 1 - Oct 31	SAMPLE MEASUREMENT		*****	lbs/day	*****		*****	mg/L			
	PERMIT REQUIREMENT	0.8 Avg Mo	*****		*****	1.0 Avg Mo	*****			1/week	24-Hr Composite
Total Phosphorus Nov 1 - Apr 30	SAMPLE MEASUREMENT		*****	lbs/day	*****		*****	mg/L			
	PERMIT REQUIREMENT	1.7 Avg Mo	*****		*****	2.0 Avg Mo	*****			1/week	24-Hr Composite
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER			TELEPHONE		DATE		
	I certify under penalty of law that this document was prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations. See 18 Pa. C.S. § 4904 (relating to unsworn falsification).						
TYPED OR PRINTED		SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	AREA CODE	NUMBER	YEAR	MO	DAY

COMMENTS *(Report all violations on the "Non-Compliance Reporting Form")*

*Shall not exceed in more than 10% of samples.

3800-FM-BPNPSM0462 3/2012

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DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF POINT AND NON-POINT SOURCE MANAGEMENT
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

PRIMARY FACILITY NAME/ADDRESS

NAME Springhill Farm STP
CLIENT Spring Hill Farm WWTF Association
ADDRESS PO Box 756
Chadds Ford, PA 19317
LOCATION Chadds Ford Township
Delaware County
WATERSHED 3-G

PA0052230	001
PERMIT NUMBER	OUTFALL NUMBER

MONITORING PERIOD						
YEAR	MO	DAY	TO	YEAR	MO	DAY

Reporting Frequency: Quarterly
DMR Effective From: January 1, 2016
DMR Effective To: December 31, 2020
Permit Expires: December 31, 2020
Permit Application Due: July 4, 2020

___ Check Here if No Discharge

NOTE: Read Instructions before completing this form

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		VALUE	VALUE	UNITS	VALUE	VALUE	VALUE	UNITS			
	SAMPLE MEASUREMENT	*****	*****		*****		*****				
Total Dissolved Solids	PERMIT REQUIREMENT	*****	*****	*****	*****	Report Daily Max	*****	mg/L		1/quarter	24-Hr Composite
	SAMPLE MEASUREMENT	*****	*****		*****		*****				
Total Copper	PERMIT REQUIREMENT	*****	*****	*****	*****	Report Daily Max	*****	mg/L		1/quarter	24-Hr Composite
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER

TYPED OR PRINTED

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

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE		DATE		
AREA CODE	NUMBER	YEAR	MO	DAY

COMMENTS *(Report all violations on the "Non-Compliance Reporting Form")*

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

INSTRUCTIONS FOR COMPLETING DISCHARGE MONITORING REPORTS (DMRs)

General

One or more Discharge Monitoring Reports (DMRs) are attached to your permit for reporting the results of self-monitoring activities as required by your permit. You should make copies of the DMRs for your ongoing use, unless you elect to participate in the Department of Environmental Protection's (DEP's) electronic DMR (eDMR) program (see www.dep.state.pa.us/edmr).

- Reporting frequencies will vary depending on the monitoring frequencies listed in your permit, and are generally monthly, quarterly semi-annually and annually.
- Your reports must be received by DEP on the 28th day of the month following the end of the reporting period, unless otherwise specified in Part C of your permit.
- Your permit may require submission of DMRs to other agencies, including the U.S. Environmental Protection Agency (EPA).
- If you receive DMRs in the mail from EPA, please discontinue use of DMR Form No. 3800-FM-BPNPSM0462 and begin using EPA's DMRs.
- DMRs will generally include pre-populated information for permittee name and address, facility location, permit number, outfall number, permit expiration date, parameter names, and permit requirements. If you identify any errors on a DMR issued by DEP, please contact the DEP regional office that issued your permit. If you identify any errors on a DMR issued by EPA, please contact DEP's Central Office at 717-787-6744. **DO NOT make changes to DMRs issued to you**.
- You may use computer-generated replicas of Form No. 3800-FM-BPNPSM0462 or of EPA's DMR if you receive prior approval from DEP and EPA. **DEP reserves the right to instruct you to discontinue the submission of computer-generated DMRs if the permit requirements you entered on the form are inaccurate.**

Instructions

1. Enter statistical results into each blank field below the "VALUE" column headers. Results must be reported in the same units shown on the DMR.
2. Sum the total number of excursions or exceedances of permit limits across the row for each parameter and enter the value into the "NO. EX" field. For example, if the permit contains limits of 6.0 S.U. (Minimum) and 9.0 S.U. (Maximum) for pH, and the Minimum and Maximum results are 5.9 S.U. and 9.1 S.U., respectively, enter "2" into the "NO. EX" field.
3. Report the actual sampling frequency and sample type utilized during the reporting period in the fields corresponding to "Frequency of Analysis" and "Sample Type", respectively.
4. Type the name of the principal executive officer (or an authorized agent designated by a principal executive officer) who is taking responsibility for the report, sign the report (should be in ink), enter the telephone number of the responsible individual, and record the date that the report was signed. Mail only original, signed copies of DMRs.
5. In the Comments section at the bottom of the DMR, you may write a brief summary of violations in this section; however, DEP requests that all violations during the monitoring period be reported in more detail on DEP's **Non-Compliance Reporting Form** (3800-FM-BPNPSM0440) and be submitted as an attachment to the DMR. Other uses of the Comments Section include explanations of attachments to the DMR, explanations for the unavailability of data, and brief summaries of issues that have affected operations or effluent quality during the monitoring period. Always consider attaching a letter or separate document to explain your situation in more detail.

No Discharge or No Data Available

If there was no discharge at all from an outfall during the monitoring period, check the "No Discharge" box on the top of the DMR. Complete the information above and below the table and mail the DMR to the appropriate agencies. Be sure to sign and date the DMR.

If there was no discharge of a specific parameter (e.g., if a chlorine limit is in the permit but chlorine was not used for disinfection during the entire reporting period), or if data are not available for a specific parameter for the entire reporting period, do not leave the DMR blank. Instead, report one of the following No Data Indicator (NODI) codes that apply to your situation in the appropriate value field, and **provide an explanation as an attachment to the DMR**:

A Use if you are exempted from monitoring the parameter because of a General Permit condition.

E Use if all samples or results are not available for the reporting period due to equipment failure or because sample collection was overlooked or samples could not be collected for the parameter.

GG Use if your permit requires sample collection and analysis only under certain conditions and those conditions were not met during the reporting period (e.g., report chlorine results only when chlorination system is used).

FF Other: use if there is any reason for the absence of data that is not covered by those above.

If you have at least one result for a parameter, the value should be reported and not a NODI code.

Calculations

The following explains how to calculate statistical values that are commonly required by permits:

Monthly Average – For Loading (lbs/day), sum the total of daily loadings and divide by the number of samples during the month. To calculate the daily loading, multiply the daily concentration (mg/l) by the flow (MGD) on the date of sampling and a conversion factor of 8.34. For Concentration, sum the total of daily concentrations and divide by the number of samples.

Weekly Average – For Loading (lbs/day), sum the total of average daily loadings during each week of the reporting period (beginning on a Sunday and ending on a Saturday) and divide by the number of samples during the week. For Concentration, sum the total of daily concentrations each week and divide by the number of samples. Report the maximum weekly average on the DMR.

Maximum Daily ("Daily Max") – Report the maximum concentration or load measured during a 24-hour period during the reporting period; if multiple measurements are taken daily, include all data in the analysis.

Instantaneous Maximum ("IMAX") – Report the maximum result obtained by a grab sample for a specific pollutant over the entire reporting period covered by a DMR.

Instantaneous Minimum ("Minimum") – Report the minimum result obtained by a grab sample for a specific pollutant over the entire reporting period covered by a DMR.

Total Monthly Load (lbs) – Sum the total of average daily loadings, divide by the number of samples during the month, and multiply by the number of days in the month.

Geometric Mean – Report the average of a set of *n* sample results given by the *n*th root of their product. If any result is zero (0), substitute 1 for the calculation. For example, five samples were analyzed with the following results: 20, 300, 400, 500, and 0. The calculation of geometric mean is as follows (note that you will need to use the power function on a calculator):

$$\sqrt[5]{20 \cdot 300 \cdot 400 \cdot 500 \cdot 1} = \sqrt[5]{1{,}200{,}000{,}000} = (1{,}200{,}000{,}000)^{1/5} = \mathbf{65}$$

Non-Detect Data

Conventional and Toxic Parameters

For calculating average values of data sets in which there are some "detections" (results at or above the laboratory reporting limit) and some "non-detect" data (results reported below the laboratory reporting limit), use the reporting limit for non-detect data. In other words, ignore the less than (<) symbol for statistical calculations and include the < symbol with the statistical result if there is at least one non-detect result in the data set. For example, four samples were analyzed with the following results: < 1.0, 2.0, < 1.0, and 1.0. The average statistical result is < 1.3.

Where the permit includes an effluent limitation for a parameter that is less than the most sensitive detection limit available, and the laboratory reports a value at or below the lowest level specified by the permit, you may use zero (0) in the calculation in lieu of the reporting limit, if the parameter is identified in 25 Pa. Code Chapter 16, Appendix A, Tables 2A and 2B. In general, parameters with limitations that are less than the most sensitive detection limit will be identified in Part C of the permit, if applicable.

Bacteria Parameters

Report all "non-detect" (e.g., < 2) and "too numerous to count" (TNTC) (e.g., > 2,000) results on DMR supplemental forms as reported by the laboratory. Do not report "TNTC" on supplemental forms, but instead report a value qualified with the">" symbol. Where a data set includes one or more "non-detect" and/or TNTC results, calculate the geometric mean by ignoring qualifying symbols, but report the value with the symbol. If a data set includes both ">" and "<" qualifiers, the ">" qualifier takes precedence for reporting. For all "non-detect" values, specify in the Comments section of the DMR the maximum volume filtered at the laboratory.

Example 1 – For results are determined, < 2, 10, 20, and 30. The geometric mean should be reported as $< (2 \bullet 10 \bullet 20 \bullet 30)^{0.25} = < 10$. Specify the maximum volume filtered for the < 2 result in the DMR Comments.

Example 2 – Three results are determined, < 2, 1,000, and > 2,000. The geometric mean should be reported as $> (2 \bullet 1{,}000 \bullet 2{,}000^{0.333} = > 158$.

Rounding and Precision

Statistical values reported on the DMR should be rounded to the same number of decimal places as the limit for the parameter as set forth in the permit. If the permit does not contain a limit but requests monitoring only, statistical values for concentration results should be rounded to the maximum number of decimal places in the data set as reported by the laboratory or the instrument used for analysis. If mass loads must be reported and there is no limit, round statistical values to the nearest whole number, unless the calculated number is less than one, in which case the value should be rounded to one significant figure (e.g., 0.1, 0.05, etc.). If the number you are rounding is followed by 5, 6, 7, 8, or 9, round the number up, otherwise round down.

The documents "Discharge Monitoring Reports Overview and Summary" (3800-BK-DEP3047) and "Management of Non-Detect Results for Discharge Monitoring Reports" (3800-FS-DEP4262) contain more information and are incorporated by reference. These documents are available on DEP's website.

Supplemental Form Inventory

The following supplemental forms (indicated in the check box column) are attached to this permit and must be completed and submitted to DEP in accordance with the permit and the supplemental form instructions. If the eDMR system is used to submit DMR reports, the spreadsheet versions of these supplemental forms, where applicable, should be used and attached to the eDMR submissions. A link to DEP's supplemental form website is available when logging into the eDMR system.

Check Box	Supplemental Form Name and No.
☒	Daily Effluent Monitoring (3800-FM-BPNPSM0435)
☒	Influent & Process Control (3800-FM-BPNPSM0436)
☐	Hauled in Municipal Wastes (3800-FM-BPNPSM0437)
☒	Sewage Sludge/Biosolids Production and Disposal (3800-FM-BPNPSM0438)
☐	Chemical Additives Usage (3800-FM-BPNPSM0439)
☒	Non-Compliance Reporting Form (3800-FM-BPNPSM0440)
☐	CSO Monthly Summary Report (3800-FM-BPNPSM0441)
☐	CSO Detailed Report (3800-FM-BPNPSM0442)
☐	Groundwater Monitoring Data Report (3800-FM-BPNPSM0443)
☐	Nutrient Monitoring (3800-FM-BPNPSM0444)
☐	Nitrogen Budget (3800-FM-BPNPSM0445)
☐	Phosphorus Budget (3800-FM-BPNPSM0446)
☐	Annual Nutrient Summary (3800-FM-BPNPSM0447)
☐	TMDL Annual Load Summary (3800-FM-BPNPSM0448)
☐	Land Application Systems (3800-FM-BPNPSM0449)
☐	Hauled in Residual Wastes (3800-FM-BPNPSM0450)
☐	Surface Water Monitoring Data Report (3800-FM-BPNPSM0461)
☒	Lab Accreditation Form (3800-FM-BPNPSM0189)
☐	Whole Effluent Toxicity Test Summary Report (3800-FM-BPNPSM0485)
☐	Storm Water Annual Inspection Form (3800-PM-WSFR0083v)
☐	Storm Water Additional Information (3800-PM-WSFR0083t)
☐	Other:

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SUPPLEMENTAL REPORT
DAILY EFFLUENT MONITORING

Facility Name: Spring Hill Farm STP
Municipality: Chadds Ford Township County: Delaware
Watershed: 3-G
Laboratories:

Month: Year:
NPDES Permit No.: PA0052230 Outfall No.: 001
Renewal application due **180 days** prior to expiration
This permit will expire on

Day	Effluent Parameters																	
	Flow		pH		DO		TRC		CBOD5		TSS		Total Dissolved Solids		Fecal Coliform		Total Nitrogen	
	Q	*MGD*	Q	*S.U.*	Q	*mg/L*	Q	*mg/L*	Q	*mg/L*	Q	*mg/L*	Q	*mg/L*	Q	*CFU/100 ml*	Q	*mg/L*
1																		
2																		
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Avg																		

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

Prepared By: Signature:
Title: Date:

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

SUPPLEMENTAL REPORT
DAILY EFFLUENT MONITORING

Facility Name: Spring Hill Farm STP
Municipality: Chadds Ford Township County: Delaware
Watershed: 3-G
Laboratories:

Month: Year:
NPDES Permit No.: PA0052230 Outfall No.: 001
Renewal application due **180 days** prior to expiration
This permit will expire on

Day	Effluent Parameters																	
	Ammonia		Total Phosphorus		Total Copper													
	Q	mg/L	Q	mg/L	Q	mg/L	Q		Q		Q		Q		Q		Q	
1																		
2																		
3																		
4																		
5																		
6																		
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Avg																		

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

Prepared By: Signature:
Title: Date:

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INSTRUCTIONS FOR COMPLETING DAILY EFFLUENT MONITORING SUPPLEMENTAL REPORT

Use this form to report daily monitoring results for the parameters that must be monitored in effluent for compliance with the permit. Results for influent parameters are normally reported on Form 3800-FM-BPNPSM0436.

1. Enter Facility Name, Municipality, County, Watershed No., Laboratories, Month, Year, NPDES Permit No., Outfall No., and Permit Expiration Date (it is noted that this information may be pre-populated if you have received this form with your permit). For Laboratories, list the names of all laboratories where samples were analyzed during the month, including on-site analysis.

2. In the column headers, below "Effluent Parameters," enter the names of parameters in the permit. Since limited space is provided, abbreviation may be necessary. If there are more parameters for an outfall than columns provided on the form, attach an additional sheet.

3. Below parameter names, and to the right of "Q" (Qualifier) column headers, enter the units associated each parameter (it is noted that this information may be pre-populated if you have received this form with your permit).

4. Enter monitoring results for parameters in the rows corresponding to the day of the month in which samples were collected. Enter results exactly as reported by the laboratory, or if measured with on-site equipment, to the level of precision recommended by the equipment manufacturer. Enter data qualifiers such as "<," ">," "J," and others in the "Q" column.

5. Calculate and report average values at the bottom of the table in accordance with the DMR Instructions (3800-FM-BPNPSM0463) and DEP guidance (3800-BK-DEP3047). Note – for bacteria, calculate and report the geometric mean value.

6. Type the name of the person who prepared the form, the person's job title, and sign and date the form after reading the certification statement.

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

SUPPLEMENTAL REPORT – INFLUENT & PROCESS CONTROL

Facility Name: Spring Hill Farm STP
Municipality: Chadds Ford Township County: Delaware
Watershed: 3-G

Month: _____ Year: _____
NPDES Permit No.: PA0052230
Renewal application due **180 days** prior to expiration
This permit will expire on

Day	Influent					Process Control				
	Flow (MGD)	BOD5 (mg/l)	BOD5 (lbs)	TSS (mg/l)	TSS (lbs)	Aeration MLSS (mg/l)	Aeration DO (mg/l)	Sludge Wasted (gallons)		
1										
2										
3										
4										
5										
6										
7										
8										
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Avg										
Max										

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

Prepared By: _____ Signature: _____

Title: _____ Date: _____

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INSTRUCTIONS FOR COMPLETING INFLUENT & PROCESS CONTROL SUPPLEMENTAL REPORT

1. Enter Facility Name, Municipality, County, Watershed No., Month, Year, NPDES Permit No., and Permit Expiration Date.

2. For **Influent**, enter daily average Influent Flow (MGD) (if an influent flow meter is in use), daily influent BOD_5 or BOD_5 concentrations (mg/l) and loads (lbs), and daily influent TSS concentrations (mg/l) and loads (lbs). Calculate loads by multiplying daily average flow (MGD) by daily average concentration (mg/l) and a conversion factor of 8.34. If an influent flow meter is not in use, you may use results from an effluent flow meter.

3. For **Process Control**, enter daily average Mixed Liquor Suspended Solids (MLSS) (mg/l) and daily average Aeration Dissolved Oxygen (DO) for aerobic biological treatment systems, and total daily Sludge Wasted (removed from biological treatment), in gallons, for all treatment system types. If a parameter does not apply to your facility, leave the column blank. Information for other parameters such as Return Activated Sludge (RAS) Rate, Recirculation Rate (for fixed media treatment systems), Sludge Blanket Thickness, Sludge Volume Index, and others may be requested by the DEP office that issued the permit.

4. Type the name of the person who prepared the form, the person's job title, and sign and date the form after reading the certification statement.

3800-FM-BPNPSM0438 3/2012

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DEPARTMENT OF ENVIRONMENTAL PROTECTION

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

SUPPLEMENTAL REPORT
SEWAGE SLUDGE / BIOSOLIDS PRODUCTION AND DISPOSAL

Facility Name: Spring Hill Farm STP
Municipality: Chadds Ford Township County: Delaware
Watershed: 3-G

Month: _____ Year: _____
NPDES Permit No.: PA0052230
Renewal application due **180 days** prior to expiration
This permit will expire on

SEWAGE SLUDGE/BIOSOLIDS PRODUCTION INFORMATION (Identify each off-site removal event and incineration event)

☐ Check here if there were no off-site removal events during the month

Date	Liquid Sewage Sludge/Biosolids Hauled Off-site			Dewatered Sewage Sludge/Biosolids Hauled Off-site			Sewage Sludge/Biosolids Dewatered and Incinerated On-site		
	Gallons	% Solids	Dry Tons	Tons Dewatered	% Solids	Dry Tons	Tons Dewatered	% Solids	Dry Tons
		TOTAL:			TOTAL:			TOTAL:	

SEWAGE SLUDGE/BIOSOLIDS AND INCINERATOR ASH DISPOSAL AND BENEFICIAL USE INFORMATION
(Identify all sites where sewage sludge/biosolids or ash were disposed or land applied)

Site Name				
Municipality				
County				
DEP Permit No.				
Type of Material*				
Dry Tons Applied/Disposed				
Type of Disposal/Use*				
Hauler Name				

*See Instructions for explanation

I certify under penalty of law that this document was prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsibie 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. See 18 Pa. C.S. § 4904 (relating to unsworn falsification).

Prepared By: _____ Signature: _____

Title: _____ Date: _____

COMMONWEALTH OF PENNSYLVANIA
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INSTRUCTIONS FOR COMPLETING SEWAGE SLUDGE / BIOSOLIDS SUPPLEMENTAL REPORT

1. Enter Facility Name, Municipality, County, Watershed No., Month, Year, NPDES Permit No., and Permit Expiration Date.

Biosolids Production Information

2. For each off-site removal event for liquid sewage sludge or biosolids and for dewatered sewage sludge or biosolids, and for each event where dewatered sewage sludge or biosolids are incinerated on-site, list the date of the event, identify the gallons (liquid) or tons (dewatered) removed or incinerated and the percent solids (e.g., 10%, 20%, etc.) Report only sewage sludge or biosolids that have been removed from the plant digesters and other solids which have been **permanently** removed from the treatment process. Do **not** include sewage sludge or biosolids from other facilities that are processed at your facility. (If there were no off-site removal events during the month, check the box above the table).

   Calculate dry tons for liquid sewage sludge or biosolids by multiplying the volume (gallons) by the percent solids and by a conversion factor of 0.0000417. For example, if 2,500 gallons of liquid biosolids is removed, and the percent solids is 3.0%, dry tons is calculated as:

   2,500 gallons x 3.0% x 0.0000417 = 0.31 dry tons

   Calculate dry tons for dewatered sewage sludge or biosolids by multiplying the tons dewatered by the percent solids and by a conversion factor of 0.01. For example, if 5 tons of dewatered biosolids is removed, and the percent solids is 50%, dry tons is calculated as:

   5 tons x 50% x 0.01 = 2.5 dry tons

   The **% Solids** of liquid or dewatered sewage sludge or biosolids must be determined periodically through laboratory testing. Do not estimate or guess this value. An acceptable test method is method 2540B in *Standard Methods for the Examination of Water and Wastewater*, 18th edition, where samples are dried at 103-105°C. Other references such as ASTM may have equivalent tests which are also acceptable.

Biosolids and Incinerator Ash Disposal and Beneficial Use Information

3. Report sewage sludge, biosolids, and ash disposal and beneficial use information by disposal/application site. There are columns for four possible sites per month - if more sites are needed, attach additional pages. For each Site Name, listed at the top of the column, enter the Municipality and County of the site, the DEP Permit No. (i.e., Biosolids permit number for land application, landfill waste management permit number, etc.), Type of Material (sewage sludge, biosolids, or incinerator ash), Dry Tons Applied/Disposed at the site for the month, Type of Disposal/Use (e.g., reed beds, agricultural utilization, composting, landfill, other treatment plant, etc.) and the name of the hauler (company or individual name).

4. Type the name of the person who prepared the form, the person's job title, and sign and date the form after reading the certification statement.

3800-FM-BPNPSM0440 3/2012

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BUREAU OF POINT AND NON-POINT SOURCE MANAGEMENT

NON-COMPLIANCE REPORTING FORM

Use this supplemental form to report all permit violations and any other non-compliance that may endanger health or the environment, in accordance with your permit. Complete all sections that apply. If you are reporting violations of permit limits, monitoring requirements or schedules that do not pose an immediate threat to health or the environment, you may attach this form to the Discharge Monitoring Report (DMR). **Title 25, Pa. Code §§ 91.33 and 91.34 (regarding incidents causing or threatening pollution and activities utilizing pollutants, respectively), in part requires immediate notification by telephone to the Department of pollution incidents, remediation, and may require an additional report on the incident or plan of pollution prevention measures.** If you are reporting other non-compliance events, and the reporting deadline does not coincide with your submission of the DMR, it should be submitted separately to the Department by the reporting deadline set forth in the permit. See instructions for more information.

Facility Name: Spring Hill Farm STP Month: _____ Year: _____

Municipality: Chadds Ford Township County: Delaware Permit No.: PA0052230

☐ **Violations of Permit Effluent Limitations***

Date	Parameter	Permit Limit	Units	Statistical Code	Result	Units	Cause of Violation	Corrective Action Taken

☐ **Sanitary Sewer Overflows and Other Unauthorized Discharges***

Event Date	Substance Discharged	Location	Volume (gals)	Duration (hrs)	Receiving Waters	Impact on Waters	Cause of Discharge	Date DEP Notified

☐ **Other Permit Violations***

- ☐ Sample collection less frequent than required — Explain _____
- ☐ Sample type not in compliance with permit — Explain _____
- ☐ Violation of permit schedule — Explain _____
- ☐ Other — Explain _____
- ☐ Other — Explain _____

*** If the space provided is not sufficient to record all information, please attach additional sheets.**

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

Prepared By: _____ Signature: _____

Title: _____ Date: _____

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

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DEPARTMENT OF ENVIRONMENTAL PROTECTION

INSTRUCTIONS FOR COMPLETING NON-COMPLIANCE REPORTING FORM

Use this supplemental form to report all permit violations and any other non-compliance that may endanger health or the environment, in accordance with your permit. Complete all sections that apply. If you are reporting violations of permit limits, monitoring requirements or schedules that do not pose an immediate threat to health or the environment, you may attach this form to the Discharge Monitoring Report (DMR). If you are reporting other non-compliance events, and the deadline for a written report (e.g., 5 days) does not coincide with your submission of the DMR, this form should be submitted separately to the Department by the reporting deadline set forth in the permit.

If you are unsure of whether an incident constitutes non-compliance that may endanger health or the environment, it is recommended that you notify the Department verbally as soon as possible after you become aware of the incident. Title 25, Pa. Code §§ 91.33 and 91.34 (regarding incidents causing or threatening pollution and activities utilizing pollutants, respectively), in part requires immediate notification by telephone to the Department of pollution incidents, remediation, and may require an additional report on the incident or plan of pollution prevention measures.

Instructions:

1. Enter the name of the facility, the municipality and county where it is located, the month and year when violations occurred, and the NPDES or WQM permit number for the facility.

2. If there were violations of permit effluent limitations during the month, check the box next to "Violations of Permit Effluent Limitations." (Note – if using the electronic version of this form, check the boxes first, and then select Tools – Unprotect Document to enter additional information). Enter the date of the violation (if a violation of a minimum or maximum limit, the date of sample collection, or if a violation of an average limit, the end of the monitoring period), the parameter name, the permit limit and units, the statistical code (e.g., "MIN", "MAX", "MO AVG", etc.), the measured result and units, the cause of the violation and the corrective action taken. **If there are more than two violations during the monitoring period and/or if the space provided is insufficient to explain the cause or corrective action, please attach additional pages.**

3. If there are Sanitary Sewer Overflow (SSO) discharges or other unauthorized discharges from the facility (e.g., spills, leaks, etc.) that enter or have the potential to enter waters of the Commonwealth, including groundwater, notify DEP by phone as soon as possible, and document the discharge on this form by checking the box next to "Sanitary Sewer Overflows and Other Unauthorized Discharges." Record the event (discharge) date, the substance discharged (e.g., sewage, on-site chemicals, etc.), the location where the discharge occurred (e.g., manhole number, pump station name, equipment description, etc.), the volume discharged (gallons), the approximate duration of the discharge (hours), the receiving waters (name of stream or groundwater), the impact on the receiving waters, if observed (e.g., solids deposition, foam, fish kill, etc.), the cause of the discharge, and the date on which the Department was verbally notified. **If there are more than two discharge events during the monitoring period and/or if the space provided is insufficient to explain the discharge, please attach additional pages.**

4. If there are other violations of the permit, check the box next to "Other Permit Violations," and check the appropriate box that describes the violation type. If not identified on the form, check the box next to "Other" and provide a written explanation. **If the space provided is insufficient to explain the violation, please attach additional pages.**

5. Type your name and title and sign and date the form after reading the certification statement.

If you have questions about completing this form, contact the Clean Water Program Operations Section of the Department in your region:

Southeast Region – (484) 250-5970
Northeast Region – (570) 826-2553
Southcentral Region – (717) 705-4707
Northcentral Region – (570) 327-0532
Southwest Region – (412) 442-4060
Northwest Region – (814) 332-6942

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DEPARTMENT OF ENVIRONMENTAL PROTECTION

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

SUPPLEMENTAL LABORATORY ACCREDITATION FORM[1]

Permittee Name: Spring Hill Farm WWTF Association

Address: P.O. Box 756
Chadds Ford, PA 19317

PERMIT NUMBER	MONITORING PERIOD Year/Month/Day						
PA0052230				TO			

PARAMETER	ANALYSIS METHOD	LAB NAME	LAB ID NUMBER[2]

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

Name/Title Principal Executive Officer _____

Phone: _____

Signature of Principal Executive Officer or Authorized Agent _____

Date: _____

[1] Submit this form with the first Discharge Monitoring Report (DMR) or Annual Report, where sample results are submitted to the Department for compliance purposes. You do not need to send this form to the Department again UNLESS there has been a change to the lab(s), parameter(s) or method(s) of analysis.

[2] For parameter(s) covered under accreditation-by-rule, submit the lab's registration number in lieu of an accreditation number.

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DEPARTMENT OF ENVIRONMENTAL PROTECTION
Southeast Regional Office

Orig. File Copy

April 2, 2013

CERTIFIED MAIL NO. 7007 3020 0002 8265 2147

Mr. Joseph L. Salvucci
Executive Director
DELCORA
100 East Fifth Street, P. O. Box 999
Chester, PA 19016-0999

Re: Final NPDES Permit - Sewage
DELCORA STP
NPDES Permit No. PA0027103
Authorization ID No. 896205
City of Chester, Delaware County

Dear Mr. Salvucci:

Your NPDES permit is enclosed. Please read the permit carefully. The permit expires on the date identified on page 1 of the permit. A renewal application must be submitted to this office 180 days prior to the permit expiration date, if a discharge is expected to continue past the expiration date of the permit.

We have reviewed the draft comment letter dated February 26, 2013 submitted by Christine Volkay-Hilditch, and the following are our responses:

(i) We acknowledge your concern regarding the eDMR coding.

(ii) On page 29, Other Requirement O is revised to eliminate the reference of the outfall extension.

(iii) Page 18 and 19, Section C.2, Planned Changes to Waste Stream of the permit is a statewide standard requirement and it remains unchanged.

(iv) On page 33, Section III. POTW Pretreatment Program Implementation, item E is revised to include the reference of EPA approval.

Enclosed are Discharge Monitoring Report (DMR) templates and DMR instructions. It is recommended that you retain the DMR templates in the event you are unable to submit DMRs electronically through DEP's eDMR system. Routine use of the eDMR system is a requirement of the permit unless the conditions in Part A III.B of the permit are met to withdraw from the eDMR system.

Also enclosed is a Supplemental Form Inventory, which identifies the forms that are attached to the permit and must be submitted as attachments to eDMR reports, as applicable (see individual form instructions). The submission of other supplemental forms may be required in accordance with the permit. We encourage you to use the spreadsheet versions of supplemental forms that contain appropriate validation and DEP-approved calculations.

We would like to bring to your attention to the enclosed information about the Early Warning System (EWS). The EWS may be useful to initiate an alert by reporting an event to downstream water suppliers and industries. We encourage you to use this notification procedure when needed.

Any person aggrieved by this action may appeal, pursuant to Section 4 of the Environmental Hearing Board Act, 35 P.S. Section 7514, and the Administrative Agency Law, 2 Pa.C.S. Chapter 5A, to the Environmental Hearing Board, Second Floor, Rachel Carson State Office Building, 400 Market Street, P.O. Box 8457, Harrisburg, PA 17105-8457, 717.787.3483. TDD users may contact the Board through the Pennsylvania Relay Service, 800.654.5984. Appeals must be filed with the Environmental Hearing Board within 30 days of receipt of written notice of this action unless the appropriate statute provides a different time period. Copies of the appeal form and the Board's rules of practice and procedure may be obtained from the Board. The appeal form and the Board's rules of practice and procedure are also available in braille or on audiotape from the Secretary to the Board at 717.787.3483. This paragraph does not, in and of itself, create any right of appeal beyond that permitted by applicable statutes and decisional law.

IF YOU WANT TO CHALLENGE THIS ACTION, YOUR APPEAL MUST REACH THE BOARD WITHIN 30 DAYS. YOU DO NOT NEED A LAWYER TO FILE AN APPEAL WITH THE BOARD.

IMPORTANT LEGAL RIGHTS ARE AT STAKE, HOWEVER, SO YOU SHOULD SHOW THIS DOCUMENT TO A LAWYER AT ONCE. IF YOU CANNOT AFFORD A LAWYER, YOU MAY QUALIFY FOR FREE PRO BONO REPRESENTATION. CALL THE SECRETARY TO THE BOARD (717.787.3483) FOR MORE INFORMATION.

If you have any questions, please contact Sara Abraham at 484.250.5195.

Sincerely,

Jenifer L. Fields, P.E.
Environmental Program Manager
Clean Water Program

Enclosures

cc: City of Chester (w/o enclosure)
Chester Environmental Partnership (w/o enclosure)
U. S. Environmental Protection Agency
Mr. Stoller-DRBC
Operations Section
Mr. O'Neil-Majors File
Ms. Lashley (w/o enclosure)
Central Office, Division of Operations, Monitoring and Data Systems
Re

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WATER STANDARDS AND FACILITY REGULATION

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DEPARTMENT OF ENVIRONMENTAL PROTECTION

AUTHORIZATION TO DISCHARGE UNDER THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM DISCHARGE REQUIREMENTS FOR PUBLICLY OWNED TREATMENT WORKS (POTWs)

NPDES PERMIT NO: PA0027103

In compliance with the provisions of the Clean Water Act, 33 U.S.C. Section 1251 *et seq.* ("the Act") and Pennsylvania's Clean Streams Law, as amended, 35 P.S. Section 691.1 *et seq.*,

Delaware County Regional Water Quality Control Authority (DELCORA)
100 East Fifth Street, P O Box 999
Chester, PA 19016-0999

is authorized to discharge from a facility known as **DELCORA STP**, located at **3201 West Front Street, City of Chester, Delaware County**, to the **Delaware River Estuary Zone 4** in Watershed(s) **3-G** in accordance with effluent limitations, monitoring requirements and other conditions set forth in Parts A, B and C hereof.

THIS PERMIT SHALL BECOME EFFECTIVE ON May 1, 2013

THIS PERMIT SHALL EXPIRE AT MIDNIGHT ON April 30, 2018

The authority granted by this permit is subject to the following further qualifications:

1. If there is a conflict between the application, its supporting documents and/or amendments and the terms and conditions of this permit, the terms and conditions shall apply.

2. Failure to comply with the terms, conditions or effluent limitations of this permit is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application. (40 CFR 122.41(a))

3. A complete application for renewal of this permit, or notice of intent to cease discharging by the expiration date, must be submitted to DEP at least 180 days prior to the above expiration date (unless permission has been granted by DEP for submission at a later date), using the appropriate NPDES permit application form. (40 CFR 122.41(b), 122.21(d))

   In the event that a timely and complete application for renewal has been submitted and DEP is unable, through no fault of the permittee, to reissue the permit before the above expiration date, the terms and conditions of this permit, including submission of the Discharge Monitoring Reports (DMRs), will be automatically continued and will remain fully effective and enforceable against the discharger until DEP takes final action on the pending permit application. (25 Pa. Code 92a.7(b), (c))

4. This NPDES permit does not constitute authorization to construct or make modifications to wastewater treatment facilities necessary to meet the terms and conditions of this permit.

DATE PERMIT ISSUED April 2, 2013

ISSUED BY

Jenifer L. Fields, P.E.
Clean Water Program Manager
Southeast Regional Office

PART A - EFFLUENT LIMITATIONS, MONITORING, RECORDKEEPING AND REPORTING REQUIREMENTS

I. A. For Outfall 001 , **Latitude** 39° 49' 25.00" , **Longitude** 75° 23' 22.00" , **River Mile Index** 80.71 , **Stream Code** 0002

Discharging to Delaware River Estuary Zone 4

which receives wastewater from DELCORA STP

1. The permittee is authorized to discharge during the period from Permit Effective Date through Completion of plant expansion.

2. Based on the anticipated wastewater characteristics and flows described in the permit application and its supporting documents and/or amendments, the following effluent limitations and monitoring requirements apply (see also Additional Requirements, Footnotes and Supplemental Information).

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day) (1)		Concentrations (mg/L)				Minimum (2) Measurement Frequency	Required Sample Type
	Average Monthly	Weekly Average	Instant. Minimum	Average Monthly	Daily Maximum	Instant. Maximum		
Flow (MGD)	Report	Report Daily Max					Continuous	Metered
pH (S.U.)			6.0			9.0	1/day	Grab
Total Residual Chlorine				0.5		1.0	1/day	Grab
CBOD5	7,000	10,500		19	29 Wkly Avg	38	1/day	24-Hr Composite
CBOD5 Raw Sewage Influent	Report			Report			1/day	24-Hr Composite
BOD5 Raw Sewage Influent	Report			Report			1/week	24-Hr Composite
CBOD20	10,500						1/week	24-Hr Composite
CBOD20 (%) Percent Removal			89.25 Min % Removal				1/week	24-Hr Composite
Total Suspended Solids	11,000	16,500		30	45 Wkly Avg	60	1/day	24-Hr Composite
Total Suspended Solids Raw Sewage Influent	Report			Report			1/day	24-Hr Composite
Total Dissolved Solids				Report	Report	Report	2/month	24-Hr Composite
Oil and Grease	5,500			15		30	1/day	Grab

Outfall 001, Continued (from Permit Effective Date through Completion of plant expansion)

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day) [1]		Concentrations (mg/L)				Minimum [2] Measurement Frequency	Required Sample Type
	Average Monthly	Weekly Average	Instant. Minimum	Average Monthly	Daily Maximum	Instant. Maximum		
Fecal Coliform (CFU/100 ml) May 1 - Sep 30				200 Geo Mean		1,000	1/day	Grab
Fecal Coliform (CFU/100 ml) Oct 1 - Apr 30				200 Geo Mean		1,000*	1/day	Grab
Ammonia-Nitrogen				Report			2/month	24-Hr Composite
Nitrate as N				Report	Report		2/month	24-Hr Composite
Nitrite as N				Report	Report		2/month	24-Hr Composite
Total Kjeldahl Nitrogen				Report			2/month	24-Hr Composite
Total Cadmium				Report			1/month	24-Hr Composite
Total Copper				Report			1/month	24-Hr Composite
Total Cyanide				Report			1/month	24-Hr Composite
Total Lead				Report			1/month	24-Hr Composite
Total Zinc				Report			1/month	24-Hr Composite

Outfall 001 , Continued (from Permit Effective Date through Completion of plant expansion)

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day) (1)		Concentrations (mg/L)				Minimum (2) Measurement Frequency	Required Sample Type
	Average Monthly	Weekly Average	Instant. Minimum	Average Monthly	Daily Maximum	Instant. Maximum		
Chlorodibromomethane				Report			1/month	Grab
Dichlorobromomethane				Report			1/month	Grab
PCBs (Dry Weather) (pg/L)** Jan 1 - Jun 30					Report		1/6 months	24-Hr Composite
PCBs (Dry Weather) (pg/L)** Jul 1 - Dec 31					Report		1/6 months	24-Hr Composite
PCBs (Wet Weather) (pg/L)** Jan 1 - Jun 30					Report		1/6 months	24-Hr Composite
PCBs (Wet Weather) (pg/L)** Jul 1 - Dec 31					Report		1/6 months	24-Hr Composite

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s):

at Outfall 001. *See Other Requirement No. R. **See Other Requirement No. S .

PART A - EFFLUENT LIMITATIONS, MONITORING, RECORDKEEPING AND REPORTING REQUIREMENTS

I. B. For Outfall 001 , **Latitude** 39° 49' 21.00" , **Longitude** 75° 23' 18.00" , **River Mile Index** 80.71 , **Stream Code** 0002

Discharging to Delaware River Estuary Zone 4

which receives wastewater from DELCORA STP

1. The permittee is authorized to discharge during the period from Completion of plant expansion*** through Permit Expiration Date.

2. Based on the anticipated wastewater characteristics and flows described in the permit application and its supporting documents and/or amendments, the following effluent limitations and monitoring requirements apply (see also Additional Requirements, Footnotes and Supplemental Information).

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day) (1)		Concentrations (mg/L)				Minimum (2) Measurement Frequency	Required Sample Type
	Average Monthly	Weekly Average	Instant. Minimum	Average Monthly	Daily Maximum	Instant. Maximum		
Flow (MGD)	Report	Report Daily Max					Continuous	Metered
pH (S.U.)			6.0			9.0	1/day	Grab
Total Residual Chlorine				0.5		1.0	1/day	Grab
CBOD5	7,000	10,500		17	25 Wkly Avg	34	1/day	24-Hr Composite
CBOD5 Raw Sewage Influent	Report			Report			1/day	24-Hr Composite
BOD5 Raw Sewage Influent	Report			Report			1/week	24-Hr Composite
CBOD20	10,500						1/week	24-Hr Composite
CBOD20 (%) Percent Removal			89.25 Min % Removal				1/week	24-Hr Composite
Total Suspended Solids	12,500	18,760		30	45 Wkly Avg	60	1/day	24-Hr Composite
Total Suspended Solids Raw Sewage Influent	Report			Report			1/day	24-Hr Composite
Total Dissolved Solids				1,000	2,000	2500	2/month	24-Hr Composite
Oil and Grease	6,250			15		30	1/day	Grab

Outfall 001, Continued (from Completion of plant expansion through Permit Expiration Date)

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day) (1)		Concentrations (mg/L)				Minimum (2) Measurement Frequency	Required Sample Type
	Average Monthly	Weekly Average	Instant. Minimum	Average Monthly	Daily Maximum	Instant. Maximum		
Fecal Coliform (CFU/100 ml) May 1 - Sep 30				200 Geo Mean		1,000	1/day	Grab
Fecal Coliform (CFU/100 ml) Oct 1 - Apr 30				200 Geo Mean		1,000*	1/day	Grab
Ammonia-Nitrogen May 1 - Oct 31	9,590			23		46	2/month	24-Hr Composite
Ammonia-Nitrogen Nov 1 - Apr 30	28,770			69		138	2/month	24-Hr Composite
Nitrate as N				Report	Report		2/month	24-Hr Composite
Nitrite as N				Report	Report		2/month	24-Hr Composite
Total Kjeldahl Nitrogen				Report			2/month	24-Hr Composite
Total Cadmium				Report			1/month	24-Hr Composite
Total Copper				0.027	0.053	0.066	1/month	24-Hr Composite
Total Cyanide				Report			1/month	24-Hr Composite
Total Lead				Report			1/month	24-Hr Composite

Outfall 001, Continued (from Completion of plant expansion through Permit Expiration Date)

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day) (1)		Concentrations (mg/L)				Minimum (2) Measurement Frequency	Required Sample Type
	Average Monthly	Weekly Average	Instant. Minimum	Average Monthly	Daily Maximum	Instant. Maximum		
Total Zinc				Report			1/month	24-Hr Composite
Chlorodibromomethane				Report			1/month	Grab
Dichlorobromomethane				Report			1/month	Grab
PCBs (Dry Weather) (pg/L)** Jan 1 - Jun 30					Report		1/6 months	24-Hr Composite
PCBs (Dry Weather) (pg/L)** Jul 1 - Dec 31					Report		1/6 months	24-Hr Composite
PCBs (Wet Weather) (pg/L)** Jan 1 - Jun 30					Report		1/6 months	24-Hr Composite
PCBs (Wet Weather) (pg/L)** Jul 1 - Dec 31					Report		1/6 months	24-Hr Composite

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s):

at Outfall 001. *See Other Requirement No. R. ** See Other Requirement No. S. *** See the Other Requirement No. O.

PART A - EFFLUENT LIMITATIONS, MONITORING, RECORDKEEPING AND REPORTING REQUIREMENTS

I. C. For Outfall 028 , **Latitude** 39° 49' 30.00" , **Longitude** 75° 23' 45.00" , **River Mile Index** 80.71 , **Stream Code** 0002

Discharging to Delaware River Estuary Zone 4

which receives wastewater from the area around the primary treatment units and the parking area around the administrative buildings (B-2 and B-5) at DELCORA STP

1. The permittee is authorized to discharge during the period from Permit Effective Date through Permit Expiration Date.

2. Based on the anticipated wastewater characteristics and flows described in the permit application and its supporting documents and/or amendments, the following effluent limitations and monitoring requirements apply (see also Additional Requirements, Footnotes and Supplemental Information).

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day) [1]		Concentrations (mg/L)				Minimum [2] Measurement Frequency	Required Sample Type
	Average Monthly		Minimum	Average Monthly	Daily Maximum	Instant. Maximum		
pH (S.U.)					Report		1/year	Grab
CBOD5					Report		1/year	Grab
Chemical Oxygen Demand					Report		1/year	Grab
Total Suspended Solids					Report		1/year	Grab
Oil and Grease					Report		1/year	Grab
Total Kjeldahl Nitrogen					Report		1/year	Grab
Total Phosphorus					Report		1/year	Grab
Dissolved Iron					Report		1/year	Grab

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s):

at Outfall 028 (inlet near the maintenance building). Also See Part C Condition No. IV

PART A - EFFLUENT LIMITATIONS, MONITORING, RECORDKEEPING AND REPORTING REQUIREMENTS

I. D. For Outfall 029 , **Latitude** 39° 49' 30.00" , **Longitude** 75° 23' 30.00" , **River Mile Index** 80.71 , **Stream Code** 0002

Discharging to Delaware River Estuary Zone 4

which receives stormwater from the areas of the primary treatment units, sludge storage and processing, truck unloading, and waste storage areas at DELCORA STP

1. The permittee is authorized to discharge during the period from Permit Effective Date through Permit Expiration Date.

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s):

Outfall 029 not monitored. Also See Part C Condition No.IV for annual inspection and additional requirements.

PART A - EFFLUENT LIMITATIONS, MONITORING, RECORDKEEPING AND REPORTING REQUIREMENTS

I. E. For Outfall 030 , **Latitude** 39° 49' 30.00" , **Longitude** 75° 23' 45.00" , **River Mile Index** 80.71 , **Stream Code** 0002

Discharging to Delaware River Estuary Zone 4

which receives stormwater from the areas around the secondary treatment units at DELCORA STP

1. The permittee is authorized to discharge during the period from Permit Effective Date through Permit Expiration Date.

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s):

Outfall 030 not monitored. Also See Part C Condition No.IV for annual inspection and additional requirements.

PART A - EFFLUENT LIMITATIONS, MONITORING, RECORDKEEPING AND REPORTING REQUIREMENTS

I. F. For Outfall 031 , **Latitude** 39° 49' 30.00" , **Longitude** 75° 23' 30.00" , **River Mile Index** 80.71 , **Stream Code** 0002

Discharging to Delaware River Estuary Zone 4

which receives stormwater from the areas of the secondary treatment units and former ash lagoon at DELCORA STP

1. The permittee is authorized to discharge during the period from Permit Effective Date through Permit Expiration Date.

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s):

Outfall 031 not monitored. Also See Part C Condition No.IV for annual inspection and additional requirements.

PART A - EFFLUENT LIMITATIONS, MONITORING, RECORDKEEPING AND REPORTING REQUIREMENTS

Outfalls	Interceptor/Regulator Locations	Latitudes	Longitudes	Name of Receiving Streams
002	Front and Booth	39°49'30"	-75°23'31"	Delaware River
003	Front and Highland	39°49'34"	-75°23'11"	Delaware River
004	Front and Hayes	39°50'36"	-75°23'07"	Delaware River
005	Front and Townsend	39°49'46"	-75°22'53"	Delaware River
007	Delaware and Reaney	39°49'51"	-75°22'45"	Delaware River
008	2nd and Tilghman	39°50'05"	-75°22'22"	Delaware River
009	2nd and Lloyd	39°50'14"	-75°22'10"	Delaware River
010	5th and Pusey	39°50'26"	-75°22'19"	Delaware River
011	2nd and Parker	39°50'26"	-75°21'54"	Delaware River
013	2nd and Welsh	39°50'37"	-75°21'17"	Delaware River
014	3rd and Upland	39°50'50"	-75°21'05"	Delaware River
032	2nd and Avenue of The States	39°50'34"	-75°21'25"	Delaware River
012	2nd and Edgmont	39°50'42"	-75°21'38"	Chester Creek
019	14th and Crozer Hospital	39°51'24"	75°21'54"	Chester Creek
020	Kerlin and Finland	39°51'24"	-75°22'27"	Chester Creek
021	9th and Sproul	39°51'08"	-75°21'49"	Chester Creek
022	6th and Sproul	39°50'56"	-75°21'47"	Chester Creek
023	3rd and Edgmont	39°50'45"	-75°21'42"	Chester Creek
024	3rd and Dock	39°50'44"	-75°21'43"	Chester Creek
025	5th and Penn	39°50'49"	-75°21'50"	Chester Creek
026	7th and Penn	39°50'58"	-75°21'55"	Chester Creek
015	4th and Melrose	39°51'03"	-75°20'48"	Ridley Creek
016	8th and McDowell	39°51'15"	-75°20'53"	Ridley Creek
017	9th and Campbell	39°51'16"	-75°20'51"	Ridley Creek
018	Sun Drive and Hancock Street	39°51'47"	-75°20'57"	Ridley Creek
033	Elkington Boulevard and Ridley Creek	39°52'22"	-75°22'29"	Ridley Creek

which receives wastewater from combined sewer overflow system

1. The permittee is authorized to discharge during the period from Permit Effective Date through Permit Expiration Date.
2. Based on the anticipated wastewater characteristics and flows described in the permit application and its supporting documents and/or amendments, the following effluent limitations and monitoring requirements apply (see also Additional Requirements, Footnotes and Supplemental Information).

These CSO outfalls are subject to terms and conditions as specified in Part C. Condition No.V. There shall be no discharge during dry weather.

PART A - EFFLUENT LIMITATIONS, MONITORING, RECORDKEEPING AND REPORTING REQUIREMENTS (Continued)

Additional Requirements

1. The permittee may not discharge:

   a. Floating solids, scum, sheen or substances that result in observed deposits in the receiving water. (25 Pa Code 92a.41(c))

   b. Oil and grease in amounts that cause a film or sheen upon or discoloration of the waters of this Commonwealth or adjoining shoreline, or that exceed 15 mg/l as a daily average or 30 mg/l at any time (or lesser amounts if specified in this permit). (25 Pa. Code 92a.47(a)(7) and 95.2(2))

   c. Substances in concentration or amounts sufficient to be inimical or harmful to the water uses to be protected or to human, animal, plant or aquatic life. (25 Pa Code 93.6(a))

   d. Foam or substances that produce an observed change in the color, taste, odor or turbidity of the receiving water, unless those conditions are otherwise controlled through effluent limitations or other requirements in this permit. (25 Pa Code 92a.41(c))

2. The monthly average percent removal of BOD_5 or $CBOD_5$ and TSS must be at least 85% for POTW facilities on a concentration basis except where 25 Pa. Code 92a.47(g) and (h) are applicable to facilities with combined sewer overflows (CSOs) or as otherwise specified in this permit. (25 Pa. Code 92a.47(a)(3))

3. If the permit requires the reporting of average weekly statistical results, the maximum weekly average concentration and maximum weekly average mass loading shall be reported, regardless of whether the results are obtained for the same or different weeks.

4. The permittee shall monitor the sewage effluent discharge(s) for the effluent parameters identified in the Part A limitations table(s) during all bypass events at the facility, using the sample types that are specified in the limitations table(s). Where the required sample type is "composite", the permittee must commence sample collection within one hour of the start of the bypass, wherever possible. The results shall be reported on the Daily Effluent Monitoring supplemental form (3800-FM-BPNPSM0435) and be incorporated into the calculations used to report self-monitoring data on Discharge Monitoring Reports (DMRs).

Footnotes

(1) When sampling to determine compliance with mass effluent limitations, the discharge flow at the time of sampling must be measured and recorded.

(2) This is the minimum number of sampling events required. Permittees are encouraged, and it may be advantageous in demonstrating compliance, to perform more than the minimum number of sampling events.

Supplemental Information

(1) If the permit requires reporting of average weekly limitations use the following guideline. If the "maximum average concentration" and the "maximum average mass loading" does not occur within the same week, both the highest weekly average concentration and the highest weekly average mass load should be reported, regardless of whether they both occur during the same calendar week.

(2) The hydraulic design capacity of 50 million gallons per day for the treatment facility is used to prepare the annual Municipal Wasteload Management Report to help determine whether a "hydraulic overload" situation exists, as defined in Title 25 Pa. Code Chapter 94.

(3) The effluent limitations for Outfall 001 were determined using an effluent discharge rate of 44 million gallons per day before the completion of plant expansion.

(4) The effluent limitations for Outfall 001 were determined using an effluent discharge rate of 50 million gallons per day after the completion of plant expansion.

II. DEFINITIONS

At Outfall (XXX) means a sampling location in outfall line XXX below the last point at which wastes are added to outfall line (XXX), or where otherwise specified.

Average refers to the use of an arithmetic mean, unless otherwise specified in this permit. (40 CFR 122.41(l)(4)(iii))

Best Management Practices (BMPs) means schedules of activities, prohibitions of practices, maintenance procedures and other management practices to prevent or reduce the pollution to surface waters of the Commonwealth. BMPs also include treatment requirements, operating procedures and practices to control plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage. (25 Pa. Code 92a.2)

Bypass means the intentional diversion of waste streams from any portion of a treatment facility. (40 CFR 122.41(m)(1)(i))

Calendar Week is defined as the seven consecutive days from Sunday through Saturday, unless the permittee has been given permission by DEP to provide weekly data as Monday through Friday based on showing excellent performance of the facility and a history of compliance. In cases when the week falls in two separate months, the month with the most days in that week shall be the month for reporting.

Clean Water Act means the Federal Water Pollution Control Act, as amended (33 U.S.C.A. §§1251 to 1387).

Composite Sample (for all except GC/MS volatile organic analysis) means a combination of individual samples (at least eight for a 24-hour period or four for an 8-hour period) of at least 100 milliliters (mL) each obtained at spaced time intervals during the compositing period. The composite must be flow-proportional; either the volume of each individual sample is proportional to discharge flow rates, or the sampling interval is proportional to the flow rates over the time period used to produce the composite. (EPA Form 2C)

Composite Sample (for GC/MS volatile organic analysis) consists of at least four aliquots or grab samples collected during the sampling event (not necessarily flow proportioned). The samples must be combined in the laboratory immediately before analysis and then one analysis is performed. (EPA Form 2C)

Daily Average Temperature means the average of all temperature measurements made, or the mean value plot of the record of a continuous automated temperature recording instrument, either during a calendar day or during the operating day if flows are of a shorter duration.

Daily Discharge means the discharge of a pollutant measured during a calendar day or any 24-hour period that reasonably represents the calendar day for purposes of sampling. For pollutants with limitations expressed in units of mass, the "daily discharge" is calculated as the total mass of the pollutant discharged over the day. For pollutants with limitations expressed in other units of measurement, the "daily discharge" is calculated as the average measurement of the pollutant over the day. (25 Pa. Code 92a.2, 40 CFR 122.2)

Daily Maximum Discharge Limitation means the highest allowable "daily discharge."

Discharge Monitoring Report (DMR) means the DEP or EPA supplied form(s) for the reporting of self-monitoring results by the permittee. (25 Pa. Code 92a.2 and 40 CFR 122.2)

Estimated Flow means any method of liquid volume measurement based on a technical evaluation of the sources contributing to the discharge including, but not limited to, pump capabilities, water meters and batch discharge volumes.

Geometric Mean means the average of a set of n sample results given by the n^{th} root of their product.

Grab Sample means an individual sample of at least 100 mL collected at a randomly selected time over a period not to exceed 15 minutes. (EPA Form 2C)

Hauled-In Wastes means any waste that is introduced into a treatment facility through any method other than a direct connection to the sewage collection system. The term includes wastes transported to and disposed of within the treatment facility or other entry points within the collection system.

Hazardous Substance means any substance designated under 40 CFR Part 116 pursuant to Section 311 of the Clean Water Act. (40 CFR 122.2)

Immersion Stabilization (i-s) means a calibrated device is immersed in the wastewater until the reading is stabilized.

Indirect Discharger means a non-domestic discharger introducing pollutants to a Publicly Owned Treatment Works (POTW) or other treatment works. (25 Pa. Code 92a.2 and 40 CFR 122.2)

Industrial User means a source of Indirect Discharge. (40 CFR 403.3)

Instantaneous Maximum Effluent Limitation means the highest allowable discharge of a concentration or mass of a substance at any one time as measured by a grab sample. (25 Pa. Code 92a.2)

Measured Flow means any method of liquid volume measurement, the accuracy of which has been previously demonstrated in engineering practice, or for which a relationship to absolute volume has been obtained.

Monthly Average Discharge Limitation means the highest allowable average of "daily discharges" over a calendar month, calculated as the sum of all "daily discharges" measured during a calendar month divided by the number of "daily discharges" measured during that month. (25 Pa. Code 92a.2)

Municipality means a city, town, borough, county, township, school district, institution, authority or other public body created by or pursuant to State law and having jurisdiction over disposal of sewage, industrial wastes, or other wastes. (25 Pa. Code 92a.2)

Publicly Owned Treatment Works (POTW) means a treatment works as defined by §212 of the Clean Water Act, owned by a state or municipality. The term includes any devices and systems used in the storage, treatment, recycling and reclamation of municipal sewage or industrial wastes of a liquid nature. The term also includes sewers, pipes or other conveyances if they convey wastewater to a POTW providing treatment. The term also means the municipality as defined in section 502(4) of the Clean Water Act, which has jurisdiction over the indirect discharges to and the discharges from such a treatment works. (25 Pa Code 92a.2 and 40 CFR 122.2)

Severe Property Damage means substantial physical damage to property, damage to the treatment facilities that causes them to become inoperable, or substantial and permanent loss of natural resources that can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production. (40 CFR 122.41(m)(1)(ii))

Stormwater means the runoff from precipitation, snow melt runoff, and surface runoff and drainage. (25 Pa. Code 92a.2)

Stormwater Associated With Industrial Activity means the discharge from any conveyance that is used for collecting and conveying stormwater and that is directly related to manufacturing, processing or raw materials storage areas at an industrial plant, and as defined at 40 CFR §122.26(b)(14)(i) – (ix) and (xi) and 25 Pa. Code 92a.2.

Toxic Pollutant means those pollutants, or combinations of pollutants, including disease-causing agents, which after discharge and upon exposure, ingestion, inhalation or assimilation into any organism, either directly from the environment or indirectly by ingestion through food chains may, on the basis of information available to DEP cause death, disease, behavioral abnormalities, cancer, genetic mutations, physiological malfunctions, including malfunctions in reproduction, or physical deformations in these organisms or their offspring. (25 Pa. Code 92a.2)

Weekly Average Discharge Limitation means the highest allowable average of "daily discharges" over a calendar week, calculated as the sum of all "daily discharges" measured during a calendar week divided by the number of "daily discharges" measured during that week.

III. SELF-MONITORING, REPORTING AND RECORDKEEPING

A. Representative Sampling

1. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity (40 CFR 122.41(j)(1)). Representative sampling includes the collection of samples, where possible, during periods of adverse weather, changes in treatment plant performance and changes in treatment plant loading. If possible, effluent samples must be collected where the effluent is well mixed near the center of the discharge conveyance and at the approximate mid-depth point, where the turbulence is at a maximum and the settlement of solids is minimized. (40 CFR 122.48 and 25 Pa. Code § 92a.61)

2. Records Retention (40 CFR 122.41(j)(2))

   Except for records of monitoring information required by this permit related to the permittee's sludge use and disposal activities which shall be retained for a period of at least 5 years, all records of monitoring activities and results (including all original strip chart recordings for continuous monitoring instrumentation and calibration and maintenance records), copies of all reports required by this permit, and records of all data used to complete the application for this permit shall be retained by the permittee for 3 years from the date of the sample measurement, report or application, unless a longer retention period is required by the permit. The 3-year period shall be extended as requested by DEP or the EPA Regional Administrator.

3. Recording of Results (40 CFR 122.41(j)(3))

   For each measurement or sample taken pursuant to the requirements of this permit, the permittee shall record the following information:

   a. The exact place, date and time of sampling or measurements.
   b. The person(s) who performed the sampling or measurements.
   c. The date(s) the analyses were performed.
   d. The person(s) who performed the analyses.
   e. The analytical techniques or methods used; and the associated detection level.
   f. The results of such analyses.

4. Test Procedures (40 CFR 122.41(j)(4))

   Facilities that test or analyze environmental samples used to demonstrate compliance with this permit shall be in compliance with laboratory accreditation requirements of Act 90 of 2002 (27 Pa. C.S. §§4101-4113) and 25 Pa. Code Chapter 252, relating to environmental laboratory accreditation. Unless otherwise specified in this permit, the test procedures for the analysis of pollutants shall be those approved under 40 CFR Part 136 (or in the case of sludge use or disposal, approved under 40 CFR Part 136, unless otherwise specified in 40 CFR Part 503 or Subpart J of 25 Pa. Code Chapter 271), or alternate test procedures approved pursuant to those parts, unless other test procedures have been specified in this permit.

5. Quality/Assurance/Control

   In an effort to assure accurate self-monitoring analyses results:

   a. The permittee, or its designated laboratory, shall participate in the periodic scheduled quality assurance inspections conducted by DEP and EPA. (40 CFR 122.41(e), 122.41(i)(3))

   b. The permittee, or its designated laboratory, shall develop and implement a program to assure the quality and accurateness of the analyses performed to satisfy the requirements of this permit, in accordance with 40 CFR Part 136. (40 CFR 122.41(j)(4))

B. Reporting of Monitoring Results

1. The permittee shall effectively monitor the operation and efficiency of all wastewater treatment and control facilities, and the quantity and quality of the discharge(s) as specified in this permit. (40 CFR 122.41(e), 122.44(i)(1))

2. Discharge Monitoring Reports (DMRs) must be completed in accordance with DEP's published DMR Instructions (3800-BPNPSM-0463). DMRs are based on calendar reporting periods. DMR(s) must be received by the agency(ies) specified in paragraph 3 below in accordance with the following schedule:

   - Monthly DMRs must be received within 28 days following the end of each calendar month.

   - Quarterly DMRs must be received within 28 days following the end of each calendar quarter, i.e., January 28, April 28, July 28, and October 28.

   - Semiannual DMRs must be received within 28 days following the end of each calendar semiannual period, i.e., January 28 and July 28.

   - Annual DMRs must be received by January 28, unless Part C of this permit requires otherwise.

3. The permittee shall complete all Supplemental Reporting forms (Supplemental DMRs) provided by DEP in this permit (or an approved equivalent), and submit the signed, completed forms as an attachment to the DMR(s). If the permittee elects to use DEP's electronic DMR (eDMR) system, one electronic submission may be made for DMRs and Supplemental DMRs. If paper forms are used, the completed forms shall be mailed to:

   Department of Environmental Protection
   Clean Water Program
   2 East Main Street
   Norristown, PA 19401

   NPDES Enforcement Branch (3WP42)
   Office of Permits & Enforcement
   Water Protection Division
   U.S. EPA - Region III
   1650 Arch Street
   Philadelphia, PA 19103-2029

4. If the permittee elects to begin using DEP's eDMR system to submit DMRs required by the permit, the permittee shall, to assure continuity of business operations, continue using the eDMR system to submit all DMRs and Supplemental Reports required by the permit, unless the following steps are completed to discontinue use of eDMR:

   a. The permittee shall submit written notification to the regional office that issued the permit that it intends to discontinue use of eDMR. The notification shall be signed by a principal executive officer or authorized agent of the permittee.

   b. The permittee shall continue using eDMR until the permittee receives written notification from DEP's Central Office that the facility has been removed from the eDMR system, and electronic report submissions are no longer expected.

5. The completed DMR Form shall be signed and certified by either of the following applicable persons, as defined in 25 Pa. Code 92a.22:

   - For a corporation - by a principal executive officer of at least the level of vice president, or an authorized representative, if the representative is responsible for the overall operation of the facility from which the discharge described in the NPDES form originates.
   - For a partnership or sole proprietorship - by a general partner or the proprietor, respectively.

- For a municipality, state, federal or other public agency - by a principal executive officer or ranking elected official.

If signed by a person other than the above, written notification of delegation of DMR signatory authority must be submitted to DEP in advance of or along with the relevant DMR form. (40 CFR 122.22(b))

6. If the permittee monitors any pollutant at monitoring points as designated by this permit, using analytical methods described in Part A III.A.4. herein, more frequently than the permit requires, the results of this monitoring shall be incorporated, as appropriate, into the calculations used to report self-monitoring data on the DMR. (40 CFR 122.41(l)(4)(ii))

C. Reporting and Notification Requirements

1. Planned Changes to Physical Facilities – The permittee shall give notice to DEP as soon as possible but no later than 30 days prior to planned physical alterations or additions to the permitted facility. A permit under 25 Pa. Code Chapter 91 may be required for these situations prior to implementing the planned changes. A permit application, or other written submission to DEP, can be used to satisfy the notification requirements of this section.

   Notice is required when:

   a. The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in 40 CFR §122.29(b). (40 CFR 122.41(l)(1)(i))

   b. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants which are not subject to effluent limitations in this permit. (40 CFR 122.41(l)(1)(ll))

   c. The alteration or addition results in a significant change in the permittee's sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan. (40 CFR 122.41(l)(1)(iii))

   d. The planned change may result in noncompliance with permit requirements. (40 CFR 122.41(l)(2))

   e. The facility is proposing an expansion or modifications to its treatment processes.

2. Planned Changes to Waste Stream – Under the authority of 25 Pa. Code 92a.24(a) and 40 CFR 122.42(b), the permittee shall provide notice to DEP and EPA as soon as possible but no later than 45 days prior to any changes in the volume or pollutant concentration of its influent waste stream as a result of indirect discharges or hauled-in wastes, as specified in paragraphs 2.a. and 2.b., below. Notice shall be provided on the "Planned Changes to Waste Stream" Supplemental Report (3800-FM-BPNPSM0482), available on DEP's website. The permittee shall provide information on the quality and quantity of waste introduced into the POTW, and any anticipated impact of the change on the quantity or quality of effluent to be discharged from the POTW (40 CFR 122.42(b)(3)). The Report shall be sent via Certified Mail or other means to confirm DEP's receipt of the notification. DEP will determine if the submission of an application and receipt of an amended permit is required.

   a. Introduction of New Pollutants (25 Pa. Code 92a.24(a), 40 CFR 122.42(b)(1))

      New pollutants are defined as parameters that meet one or more of the following criteria:

      (i) Were not detected in the facilities' influent waste stream as reported in the permit application, or were otherwise not analyzed in the influent and reported to DEP prior to permit issuance;

      (ii) Have not been previously approved to be included in the permittee's influent waste stream by DEP and/or EPA in writing;

(iii) Are previously unapproved pollutants introduced into the POTW from an indirect discharger which would be subject to Sections 301 and 306 of the Clean Water Act if it were directly discharging those pollutants (40 CFR 122.42(b)(1)).

The permittee shall provide notification of the introduction of new pollutants in accordance with paragraph 2 above. The permittee may not authorize the introduction of new pollutants until the permittee receives DEP's and/or EPA's written approval.

b. Increased Loading of Approved Pollutants (25 Pa. Code 92a.24(a), 40 CFR 122.42(b)(2))

Approved pollutants are defined as parameters that meet one or more of the following criteria:

(i) Were detected in the facilities' influent waste stream as reported in the permittee's permit application or were otherwise analyzed and reported to DEP prior to permit issuance;

(ii) Have an effluent limitation or monitoring requirement in this permit;

(iii) Have been previously approved for the permittee's influent waste stream by DEP in writing.

The permittee shall provide notification of the introduction of increased influent loading (lbs/day) of approved pollutants in accordance with paragraph 2 above when (1) the cumulative increase in influent loading (lbs/day) exceeds 10% of the maximum loading reported in the permit application, or a loading previously approved by DEP, or (2) may cause an exceedance in the effluent of Effluent Limitation Guidelines (ELGs) or limitations in Part A of this permit, or (3) may cause interference or pass through at the POTW, or (4) may cause exceedances of the applicable water quality standards in the receiving stream. Unless specified otherwise in this permit, if DEP and/or EPA does not respond to the notification within 30 days of its receipt, the permittee may proceed with the increase in loading. The acceptance of increased loading of approved pollutants may not result in an exceedance of ELGs or effluent limitations, may not result in a hydraulic or organic overload condition as defined in 25 Pa. Code 94.1, and may not cause exceedances of the applicable water quality standards in the receiving stream.

c. New Information on Existing Discharges

The permittee shall notify DEP and EPA where it discovers new information, not reported previously, on the quality and quantity of the effluent introduced into the POTW by an industrial user or an indirect discharger and the anticipated impact of the change in the quality and quantity of effluent to be discharged from the POTW. (40 CFR 122.41(h) and 122.62)

3. Reporting Requirements for Hauled-In Wastes

a. Receipt of Residual Waste

(i) The permittee shall document the receipt of all hauled-in residual wastes (including but not limited to wastewater from oil and gas wells, food processing waste, and landfill leachate) received for processing at the treatment facility. The permittee shall report hauled-in residual wastes on a monthly basis to DEP on the "Hauled In Residual Wastes" Supplemental Report (3800-FM-BPNPSM0450) as an attachment to the DMR. If no residual wastes were received during a month, submission of the Supplemental Report is not required.

The following information is required by the Supplemental Report. The information used to develop the Report shall be retained by the permittee for five years from the date of receipt and must be made available to DEP or EPA upon request.

(1) The dates that residual wastes were received.

(2) The volume (gallons) of wastes received.

(3) The license plate number of the vehicle transporting the waste to the treatment facility.

(4) The permit number(s) of the well(s) where residual wastes were generated, if applicable.

(5) The name and address of the generator of the residual wastes.

(6) The type of wastewater.

(7) Documentation of whether or not a chemical analysis of the residual wastes were reported on a Residual Waste Form 26R, or a separate waste characterization using the parameters from Form 26R.

The transporter of residual waste must maintain these and other records as part of the daily operational record (25 Pa. Code 299.219). If the transporter is unable to provide this information, the residual wastes shall not be accepted by the permittee until such time as the transporter is able to provide the required information.

(ii) The following conditions apply to the characterization of residual wastes received by the permitted treatment facility:

(1) The permitted facility must receive and maintain on file a characterization of the residual wastes it receives from the generator, as required by 25 Pa. Code 287.54. The characterization shall conform to the Bureau of Waste Management's Form 26R except as noted in paragraph (2), below. Each load of residual waste received must be characterized accordingly.

(2) For wastewater generated from hydraulic fracturing operations ("frac wastewater") within the first 30 production days of a well site, the characterization may be a general frac wastewater characterization approved by DEP. Thereafter, the characterization must be waste-specific and reported on the Form 26R.

b. Receipt of Municipal Waste

(i) The permittee shall document the receipt of all hauled-in municipal wastes (including but not limited to septage and liquid sewage sludge) received for processing at the treatment facility. The permittee shall report hauled-in municipal wastes on a monthly basis to DEP on the "Hauled In Municipal Wastes" Supplemental Report (3800-FM-BPNPSM0437) as an attachment to the DMR. If no municipal wastes were received during a month, submission of the Supplemental Report is not required.

The following information is required by the Supplemental Report:

(1) The dates that municipal wastes were received.

(2) The volume (gallons) of wastes received.

(3) The BOD_5 concentration (mg/l) and load (lbs) for the wastes received.

(4) The location(s) where wastes were disposed of within the treatment facility.

(ii) Sampling and analysis of hauled-in municipal wastes must be completed to characterize the organic strength of the wastes, unless composite sampling of influent wastewater is performed at a location downstream of the point of entry for the wastes. The influent BOD_5 characterization for the treatment facility, as reported in the annual Municipal Wasteload Management Report per 25 Pa. Code Chapter 94, must be representative of the hauled-in municipal wastes received.

4. Unanticipated Noncompliance or Potential Pollution Reporting

   a. Immediate Reporting - The permittee shall immediately report any incident causing or threatening pollution in accordance with the requirements of 25 Pa. Code Sections 91.33 and 92a.41(b).

      (i) If, because of an accident, other activity or incident a toxic substance or another substance which would endanger users downstream from the discharge, or would otherwise result in pollution or create a danger of pollution or would damage property, the permittee shall immediately notify DEP by telephone of the location and nature of the danger. Oral notification to the Department is required as soon as possible, but no later than 4 hours after the permittee becomes aware of the incident causing or threatening pollution.

      (ii) If reasonably possible to do so, the permittee shall immediately notify downstream users of the waters of the Commonwealth to which the substance was discharged. Such notice shall include the location and nature of the danger.

      (iii) The permittee shall immediately take or cause to be taken steps necessary to prevent injury to property and downstream users of the waters from pollution or a danger of pollution and, in addition, within 15 days from the incident, shall remove the residual substances contained thereon or therein from the ground and from the affected waters of this Commonwealth to the extent required by applicable law.

   b. The permittee shall report any noncompliance which may endanger health or the environment in accordance with the requirements of 40 CFR 122.41(l)(6). These requirements include the following obligations:

      (i) 24 Hour Reporting - The permittee shall orally report any noncompliance with this permit which may endanger health or the environment within 24 hours from the time the permittee becomes aware of the circumstances. The following shall be included as information which must be reported within 24 hours under this paragraph (40 CFR 122.41(l)(6)(ii)):

         (1) Any unanticipated bypass which exceeds any effluent limitation in the permit;

         (2) Any upset which exceeds any effluent limitation in the permit; and

         (3) Violation of the maximum daily discharge limitation for any of the pollutants listed in the permit as being subject to the 24-hour reporting requirement.

      (ii) Written Report - A written submission shall also be provided within 5 days of the time the permittee becomes aware of any noncompliance which may endanger health or the environment. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.

      (iii) Waiver of Written Report - DEP may waive the written report on a case-by-case basis if the associated oral report has been received within 24 hours from the time the permittee becomes aware of the circumstances which may endanger health or the environment. Unless such a waiver is expressly granted by DEP, the permittee shall submit a written report in accordance with this paragraph. (40 CFR 122.41(l)(6)(iii))

5. Other Noncompliance

   The permittee shall report all instances of noncompliance not reported under paragraph C.4 of this section or specific requirements of compliance schedules, at the time DMRs are submitted, on the Non-Compliance Reporting Form (3800-FM-BPNPSM0440). The reports shall contain the information listed in paragraph C.4.b.(ii) of this section. (40 CFR 122.41(l)(7))

PART B

I. MANAGEMENT REQUIREMENTS

A. Compliance Schedules (25 Pa. Code 92a.51, 40 CFR 122.47(a))

1. The permittee shall achieve compliance with the terms and conditions of this permit within the time frames specified in this permit.

2. The permittee shall submit reports of compliance or noncompliance, or progress reports as applicable, for any interim and final requirements contained in this permit. Such reports shall be submitted no later than 14 days following the applicable schedule date or compliance deadline. (40 CFR 122.47(a)(4))

B. Permit Modification, Termination, or Revocation and Reissuance

1. This permit may be modified, terminated, or revoked and reissued during its term in accordance with 25 Pa. Code 92a.72 and 40 CFR 122.41(f).

2. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance, does not stay any permit condition. (40 CFR 122.41(f))

3. In the absence of DEP action to modify or revoke and reissue this permit, the permittee shall comply with effluent standards or prohibitions established under Section 307(a) of the Clean Water Act for toxic pollutants within the time specified in the regulations that establish those standards or prohibitions. (40 CFR 122.41(a)(1))

C. Duty to Provide Information

1. The permittee shall furnish to DEP, within a reasonable time, any information which DEP may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. (40 CFR 122.41(h))

2. The permittee shall furnish to DEP, upon request, copies of records required to be kept by this permit. (40 CFR 122.41(h))

3. Other Information - Where the permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to DEP, it shall promptly submit the correct and complete facts or information. (40 CFR 122.41(l)(8))

4. The permittee shall provide the following information in the annual Municipal Wasteload Management Report, required under the provisions of Title 25 Pa. Code Chapter 94:

   a. The requirements identified in 25 Pa. Code 94.12.

   b. The identity of any indirect discharger(s) served by the POTW which are subject to pretreatment standards adopted under Section 307(b) of the Clean Water Act; the POTW shall also specify the total volume of discharge and estimate concentration of each pollutant discharged into the POTW by the indirect discharger.

   c. A "Solids Management Inventory" including the following information for the preceding year, at a minimum: average annual flow (MGD), average influent BOD_5 (mg/l), average effluent $CBOD_5$ (mg/l), total volume of sludge wasted (gallons), average solids concentration of return or waste sludge flow (mg/l), and total sludge or biosolids generated (wet or dry tons).

   d. The total volume of hauled-in residual and municipal wastes received during the year, by source.

e. The Annual Report requirements for permittees required to implement an industrial pretreatment program listed in Part C, as applicable.

D. General Pretreatment Requirements

1. POTWs shall require indirect dischargers to the treatment works subject to pretreatment standards adopted under Section 307(b) of the Clean Water Act to comply with the reporting requirements of Sections 204(b), 307, and 308 of the Clean Water Act and regulations thereunder.

2. Any POTW (or combination of POTWs operated by the same authority) with a total design flow greater than 5 million gallons per day (MGD) and receiving from industrial users pollutants which pass through or interfere with the operation of the POTW or are otherwise subject to Pretreatment Standards will be required to establish a POTW Pretreatment Program unless specifically exempted by the Approval Authority. A POTW with a design flow of 5 MGD or less may be required to develop a POTW Pretreatment Program if the Approval Authority finds that the nature or volume of the industrial influent, treatment process upsets, violations of effluent limitations, contamination of sludge, or other circumstances warrant in order to prevent interference or pass through. (40 CFR 403.8)

3. Each POTW with an approved Pretreatment Program pursuant to 40 CFR 403.8 shall develop and enforce specific limits to implement the prohibitions listed in 40 CFR 403.5(a)(1) and (b), and shall continue to develop these limits as necessary and effectively enforce such limits. This condition applies, for example, when there are planned changes to the waste stream as identified in Part A III.C.2. If the permittee is required to develop or continue implementation of a Pretreatment Program, detailed requirements will be contained in Part C of this permit.

4. For all POTWs, where pollutants contributed by indirect dischargers result in interference or pass through, and a violation is likely to recur, the permittee shall develop and enforce specific limits for indirect dischargers and other users, as appropriate, that together with appropriate facility or operational changes, are necessary to ensure renewed or continued compliance with this permit or sludge use or disposal practices. Where POTWs do not have an approved Pretreatment Program, the permittee shall submit a copy of such limits to DEP when developed. (25 Pa. Code 92a.47(d))

E. Proper Operation and Maintenance

1. The permittee shall employ operators certified in compliance with the Water and Wastewater Systems Operators Certification Act (63 P.S. §§1001-1015.1).

2. The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the terms and conditions of this permit. Proper operation and maintenance includes, but is not limited to, adequate laboratory controls including appropriate quality assurance procedures. This provision also includes the operation of backup or auxiliary facilities or similar systems that are installed by the permittee, only when necessary to achieve compliance with the terms and conditions of this permit. (40 CFR 122.41(e))

F. Duty to Mitigate

The permittee shall take all reasonable steps to minimize or prevent any discharge, sludge use or disposal in violation of this permit that has a reasonable likelihood of adversely affecting human health or the environment. (40 CFR 122.41(d))

G. Bypassing

1. Bypassing Not Exceeding Permit Limitations - The permittee may allow a bypass to occur which does not cause effluent limitations to be exceeded, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions in paragraphs two, three and four of this section. (40 CFR 122.41(m)(2))

2. Other Bypassing - In all other situations, bypassing is prohibited and DEP may take enforcement action against the permittee for bypass unless:

   a. A bypass is unavoidable to prevent loss of life, personal injury or "severe property damage." (40 CFR 122.41(m)(4)(i)(A))

   b. There are no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate backup equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance. (40 CFR 122.41(m)(4)(i)(B))

   c. The permittee submitted the necessary notice required in paragraph G.4 below. (40 CFR 122.41(m) (4)(i)(C))

3. DEP may approve an anticipated bypass, after considering its adverse effects, if DEP determines that it will meet the conditions listed in paragraph G.2 above. (40 CFR 122.41(m)(4)(ii))

4. Notice

   a. Anticipated Bypass – If the permittee knows in advance of the need for a bypass, it shall submit prior notice, if possible, at least 10 days before the bypass. (40 CFR 122.41(m)(3)(i))

   b. Unanticipated Bypass

      (i) The permittee shall submit immediate notice of an unanticipated bypass causing or threatening pollution. The notice shall be in accordance with Part A III.C.4.a.

      (ii) The permittee shall submit oral notice of any other unanticipated bypass within 24 hours, regardless of whether the bypass may endanger health or the environment or whether the bypass exceeds effluent limitations. The notice shall be in accordance with Part A III.C.4.b.

H. Sanitary Sewer Overflows (SSOs)

An SSO is an overflow of wastewater, or other untreated discharge from a separate sanitary sewer system (which is not a combined sewer system), which results from a flow in excess of the carrying capacity of the system or from some other cause prior to reaching the headworks of the sewage treatment facility. SSOs are not authorized under this permit. The permittee shall immediately report any SSO to DEP in accordance with Part A III.C.4 of this permit.

II. PENALTIES AND LIABILITY

A. Violations of Permit Conditions

Any person violating Sections 301, 302, 306, 307, 308, 318 or 405 of the Clean Water Act or any permit condition or limitation implementing such sections in a permit issued under Section 402 of the Act is subject to civil, administrative and/or criminal penalties as set forth in 40 CFR §122.4l(a)(2).

Any person or municipality, who violates any provision of this permit; any rule, regulation or order of DEP; or any condition or limitation of any permit issued pursuant to the Clean Streams Law, is subject to criminal and/or civil penalties as set forth in Sections 602, 603 and 605 of the Clean Streams Law.

B. Falsifying Information

Any person who does any of the following:

- Falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under this permit, or

- Knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit (including monitoring reports or reports of compliance or noncompliance)

Shall, upon conviction, be punished by a fine and/or imprisonment as set forth in *18 Pa.C.S.A § 4904* and 40 CFR §122.41(j)(5) and (k)(2).

C. Liability

Nothing in this permit shall be construed to relieve the permittee from civil or criminal penalties for noncompliance pursuant to Section 309 of the Clean Water Act or Sections 602, 603 or 605 of the Clean Streams Law.

Nothing in this permit shall be construed to preclude the institution of any legal action or to relieve the permittee from any responsibilities, liabilities or penalties to which the permittee is or may be subject to under the Clean Water Act and the Clean Streams Law.

D. Need to Halt or Reduce Activity Not a Defense

It shall not be a defense for the permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit. 40 CFR 122.41(c)

III. OTHER RESPONSIBILITIES

A. Right of Entry

Pursuant to Sections 5(b) and 305 of Pennsylvania's Clean Streams Law, and Title 25 Pa. Code Chapter 92a and 40 CFR §122.41(i), the permittee shall allow authorized representatives of DEP and EPA, upon the presentation of credentials and other documents as may be required by law:

1. To enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit; (40 CFR 122.41(i)(1))

2. To have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit; (40 CFR 122.41(i)(2))

3. To inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices or operations regulated or required under this permit; and (40 CFR 122.41(i)(3))

4. To sample or monitor at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by the Clean Water Act or the Clean Streams Law, any substances or parameters at any location. (40 CFR 122.41(i)(4))

B. Transfer of Permits

1. Transfers by modification. Except as provided in paragraph 2 of this section, a permit may be transferred by the permittee to a new owner or operator only if this permit has been modified or revoked and reissued, or a minor modification made to identify the new permittee and incorporate such other requirements as may be necessary under the Clean Water Act. (40 CFR 122.61(a))

2. Automatic transfers. As an alternative to transfers under paragraph 1 of this section, any NPDES permit may be automatically transferred to a new permittee if:

   a. The current permittee notifies DEP at least 30 days in advance of the proposed transfer date in paragraph 2.b. of this section; (40 CFR 122.61(b)(1))

b. The notice includes the appropriate DEP transfer form signed by the existing and new permittees containing a specific date for transfer of permit responsibility, coverage and liability between them; and (40 CFR 122.61(b)(2))

c. DEP does not notify the existing permittee and the proposed new permittee of its intent to modify or revoke and reissue this permit, the transfer is effective on the date specified in the agreement mentioned in paragraph 2.b. of this section. (40 CFR 122.61(b)(3))

d. The new permittee is in compliance with existing DEP issued permits, regulations, orders and schedules of compliance, or has demonstrated that any noncompliance with the existing permits has been resolved by an appropriate compliance action or by the terms and conditions of the permit (including compliance schedules set forth in the permit), consistent with 25 Pa. Code 92a.51 (relating to schedules of compliance) and other appropriate Department regulations. (25 Pa. Code 92a.71)

3. In the event DEP does not approve transfer of this permit, the new owner or controller must submit a new permit application.

C. Property Rights

The issuance of this permit does not convey any property rights of any sort, or any exclusive privilege. (40 CFR 122.41(g))

D. Duty to Reapply

If the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the permittee must apply for a new permit. (40 CFR 122.41(b))

E. Other Laws

The issuance of this permit does not authorize any injury to persons or property or invasion of other private rights, or any infringement of state or local law or regulations.

IV. ANNUAL FEE

Permittees shall pay an annual fee in accordance with 25 Pa. Code § 92a.62. Annual fee amounts are specified in the following schedule and are due on each anniversary of the effective date of the most recent new or reissued permit. All flows identified in the schedule are annual average design flows. (25 Pa. Code 92a.62)

Small Flow Treatment Facility (SRSTP and SFTF)	$0
Minor Sewage Facility < 0.05 MGD (million gallons per day)	$250
Minor Sewage Facility ≥ 0.05 and < 1 MGD	$500
Minor Sewage Facility with CSO (Combined Sewer Overflow)	$750
Major Sewage Facility ≥ 1 and < 5 MGD	$1,250
Major Sewage Facility ≥ 5 MGD	$2,500
Major Sewage Facility with CSO	$5,000

As of the effective date of this permit, the facility covered by the permit is classified in the following fee category: **Major Sewage Facility with CSO**.

Invoices for annual fees will be mailed to permittees approximately three months prior to the due date. In the event that an invoice is not received, the permittee is nonetheless responsible for payment. Throughout a five year permit term, permittees will pay four annual fees followed by a permit renewal application fee in the last year of permit coverage. Permittees may contact the DEP at 717-787-6744 with questions related to annual fees. The fees identified above are subject to change in accordance with 25 Pa. Code 92a.62(e).

Payment for annual fees shall be remitted to DEP at the address below by the anniversary date. Checks should be made payable to the Commonwealth of Pennsylvania.

PA Department of Environmental Protection
Bureau of Point and Non-Point Source Management
Re: Chapter 92a Annual Fee
P.O. Box 8466
Harrisburg, PA 17105-8466

PART C

I. OTHER REQUIREMENTS

A. Notification of the designation of the responsible operator must be submitted to the permitting agency by the permittee within 60 days after the effective date of the permit and from time to time thereafter as the operator is replaced.

B. For reporting purposes on the DMR, the term "average weekly" shall mean the highest average weekly value observed during the monthly monitoring period.

C. If, at any time, the DEP determines that the discharge permitted herein creates a public nuisance or causes environmental harm to the receiving water of the Commonwealth, the DEP may require the permittee to adopt such remedial measures as will produce a satisfactory effluent. If the permittee fails to adopt such remedial measures within the time specified by the DEP, the right to discharge herein granted shall, upon notice by the DEP, cease and become null and void.

D. The approval herein given is specifically made contingent upon the permittee acquiring all necessary property rights by easement or otherwise, providing for the satisfactory construction, operation, maintenance, and replacement of all sewers or sewerage structures associated with the herein approved discharge in, along, or across private property, with full rights of ingress, egress and regress.

E. The CBOD20 in the raw wastewater shall be reduced by at least 89 1/4 percent as a monthly average in accordance with the requirements of the Delaware River Basin Commission for Zone 4 of the Delaware Estuary. This requirement is not applicable for those days during wet weather events, when average daily flow rate exceeds 66 mgd.

The percent removal shall be calculated from the weekly 24-hour composite samples of the influent and effluent. The influent samples must reflect true characteristics of the raw wastewater and must not be affected by plant recycle flows.

F. Analysis for the following pollutant(s) shall be performed using the following test method(s) contained in 40 C.F.R. Part 136, Guidelines Establishing Test Procedures for the Analysis of Pollutants, or any approved test method(s) of equal or greater sensitivity:

Parameter	Test Method
Lead, Total	200.7 (ICP/AES)
Cadmium, Total	200.8 (ICP/MS)
Copper, Total	200.7 (ICP/AES)
Zinc, Total	200.7 (ICP/AES)
Cyanide, Total	335.4 (Color, Auto)

G. If there is a change in ownership of this facility or in the name of the permittee, an application for transfer of the permit must be submitted to the DEP.

H. Requirements for Total Residual Chlorine (TRC)

Source Reduction and Chlorine Minimization

To reduce or eliminate the amount of chlorine discharged into water bodies, the permittee must

1. Implement source reduction activities 2. Improve operation/maintenance practices, and
3. Improve/adjust process controls.

The permittee will ensure that applied chlorine dosages, used for disinfection or other purposes, are optimized to the degree necessary such that the total residual chlorine in the discharge does not cause an adverse stream impact. In doing so, the permittee shall consider relevant factors affecting chlorine

dosage, such as wastewater characteristics, mixing and contact times, desired result of chlorination, and expected impact on the receiving water body.

The effluent limits for total residual chlorine contained in PART A of the permit is 0.5 mg/l as an average monthly limit. The limit is based on the data of the chlorine demand of the Delaware River during low tide conditions. DEP reserves the right to revise TRC limit based on additional data in the future collected during low and high tides conditions in the Delaware River.

If the DEP determines or receives documented evidence that levels of TRC in the discharge are causing adverse water quality impacts in the receiving water, the permittee shall be required to institute necessary additional steps to reduce or eliminate such impact.

I. Collected screenings, slurries, sludges, and other solids shall be handled and disposed of in compliance with 25 Pa. Code, Chapters 271, 273, 275, 281, 283, and 285 (relating to general provisions and requirements for landfilling, land application, composting, processing, and storage of municipal waste), Chapters 261a, 262a, 263a, and 270a (related to identification of hazardous waste, requirements for generators and transporters, and hazardous waste permit programs) and applicable Federal Regulations, the Federal Clean Water Act, RCRA, and their amendments.

J. The DEP may identify and require certain discharge specific data to be submitted before the expiration date of this permit. Upon notification by the DEP, the permittee will have 12 months from the date of the notice to provide the required data. These data, along with any other data available to the DEP, will be used in completing the Watershed TMDL/WLA Analysis and in establishing discharge effluent limits. In the event that DEP requires the submission of data pursuant to this condition, the permittee shall have the right to appeal or otherwise contest the requirement.

K. Instantaneous maximum limitations are imposed to allow for a grab sample to be collected by the appropriate regulatory agency to determine compliance. The permittee does not have to monitor for the instantaneous maximum limitation except for the parameters oil and grease, pH, total residual chlorine, and fecal coliform. However, if grab samples are collected for parameters normally monitored through composite sampling, the results must be reported.

L. The permittee shall operate the sewage treatment plant to provide treatment for the peak design wastewater without causing treatment plant upsets. Throttling of influent flows to the plant resulting in avoidable, premature sewer system overflows is prohibited.

M. The permittee shall monitor the overflow from the raw sewage pump station (EPS-1) at the sewage treatment plant during each overflow event. The date, time and volume shall be recorded and submitted to the DEP within 28 days after the end of each overflow event. Use the enclosed overflow report form.

N. The Commonwealth's Clean Streams Law (P.L. 1987, No. 394) delegates the authority to preserve and improve the purity of its waters and develop remedies to purify those waters currently polluted to DEP, in the form of adopting rules and regulations as necessary to accomplish these tasks. Water Quality analyses performed for the major watershed of the Commonwealth to date show that many of the rivers and streams of Pennsylvania have a very limited ability to assimilate additional total dissolved solids (TDS). TDS can adversely affect aquatic life due to increases in salinity. The major concern associated with high TDS concentrations relates to direct effects of increased salinity on the health of aquatic organisms and potable water supplies. The Department has begun the process of modifying regulations for TDS, chlorides, and sulfates that are designed to protect stream uses. The permit may be modified when these regulatory changes go into effect. At such time, the current TDS limits may be modified through an amendment to the permit.

O. The authorization to discharge 50 mgd of wastewater as contained in Part A of this permit is subject to the fact that construction/modification of the plant is completed in accordance with the Water Quality Management Permit No. 2311402 issued on December 6, 2011.

P. This permit may be modified or revoked and reissued, as provided pursuant to 40 C.F.R. 122.62 and 124.5, for the following reasons:

1. To include new or revised conditions developed to comply with any State or Federal law or regulation that addresses CSOs that is adopted or promulgated subsequent to the effective date of this permit.

2. To include new or revised conditions if new information, not available at the time of permit issuance, indicates that CSO controls imposed under the permit have failed to ensure the attainment of State Quality Standards.

3. To include new or revised conditions based on new information resulting from implementation of the long-term control plan.

In addition, this permit may be modified or revoked and reissued for any reason specified in 40 C.F.R. 122.62.

Q. Laboratory Certification

The Environmental Laboratory Accreditation Act of 2002 requires that all environmental laboratories register with the DEP. An environmental laboratory is any facility engaged in the testing or analysis of environmental samples required by a statute administered by the DEP relating to the protection of the environment or of public health, safety, and welfare.

R. The seasonal effluent limitations for fecal coliform are based on Chapter 92a (§ 92a.47(4) & (5)) of DEP's regulations and Delaware River Basin Commission's (DRBC's) Water Quality Regulations at § 4.30.4.A. DEP's regulations govern the summer limits for fecal coliform while the winter limits are based on DRBC's regulations. The DRBC regulations state that during winter season from October through April, the instantaneous maximum concentration of fecal coliform organisms shall not be greater than 1,000 per 100 milliliters in more than 10 percent of the samples tested. For reporting purposes, a copy of the guidelines on the 10 percent rule is enclosed with the permit.

S. On December 15, 2003, the U.S. Environmental Protection Agency (EPA), Regions 2 and 3, adopted a Total Maximum Daily Loads (TMDLs) for Polychlorinated Biphenyls (PCBs) for Zones 2, 3, 4, and 5 of the tidal Delaware River. The TMDLs require the facilities identified as discharging PCBs to these zones of the Delaware River or to the tidal portions of tributaries to these zones to conduct monitoring for 209 PCB congeners, and prepare and implement a PCB Pollutant Minimization Plan (PMP).

This facility has been identified as a Group 1 discharger. Group 1 dischargers have detected 4 or more PCB congeners and contribute to 99% of the cumulative PCB loading to Zones 2-5. Accordingly, the permittee shall collect one 24-hour composite sample per six months during a wet weather flow and one 24-hour composite sample per six months during a dry weather flow. The samples shall be collected from Outfall 001. The permittee shall report total PCB values on the DMR form from all these test results.

Sample collection protocols and criteria referenced at http://www.state.nj.us/drbc/quality/toxics/pcbs/monitoring.html shall be followed. All sample analyses shall be performed using EPA Method 1668A, Revision A: Chlorinated Biphenyl Congeners in Water, Soil, Sediment, and Tissue by HRGC/HRMS. EPA-821-R-00-002, December 1999 as supplemented or amended, and results for all 209 PCB congeners shall be reported. Project-specific analytical modifications, and reporting requirements found are at http://www.state.nj.us/drbc/quality/toxics/pcbs/monitoring.html shall be followed. Monitoring information, sample data, and reports associated with PCB monitoring shall be submitted to the DEP and DRBC in the form of two compact discs in the format referenced at http://www.state.nj.us/drbc/library/documents/PCB-EDD011309.pdf .

In accordance with the U.S. EPA, Regions 2 and 3, TMDLs for PCBs for Zones 2–5 of the Tidal Delaware River Estuary, the permittee submitted a PMP for PCBs to the DRBC in October 2005, *which was approved on* January 17, 2006.Therefore, the permittee shall:

i. Continue to implement the PMP to achieve PCB loading reduction goals, and;

ii. Submit an Annual Report to DRBC and the Department consistent with the guidance specified at http://www.state.nj.us/drbc/programs/quality/pmp.html. This Annual Report is due by January 31 of each year.

The PMP Annual Report and PCB data shall be submitted to the Department and DRBC at the following addresses:

PA Department of Environmental Protection
Southeast Regional Office
Clean Water Program
2 East Main Street
Norristown, PA 19401

Delaware River Basin Commission
Modeling, Monitoring & Assessment Branch
P.O. Box 7360
West Trenton, NJ 08628

T. The permittee shall not accept wastewater from natural gas well drilling, hydraulic fracturing or natural gas production for treatment and disposal at the DELCORA STP. If in the future the permittee proposes to accept these types of waste streams, the permittee must obtain approval from DEP prior to accepting these types of waste streams.

U. Within 30 days of the completion of construction of the outfall extension, the permittee shall notify DEP of such completion.

II. WHOLE EFFLUENT TOXICITY

Acute Testing

The permittee must perform quarterly Whole Effluent Toxicity (WET) tests to generate acute toxicity data on the cladoceran, *Ceriodaphnia dubia* and the fathead minnow, *Pimephales promelas* for the permit term. Acute toxicity testing shall follow Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms, Fifth Edition, October 2002 (EPA-821-R-02-012). The dilution series to be used is 100%, 50%, 25%, 12.5% and 6.25%. The results shall be reported as Lethal Concentration for 50 percent of the population (LC_{50}) and Acute Toxic Units (TUa) at 48-hour and 96-hour durations for the fathead minnow *Pimephales promelas* and at a 48-hour duration for the cladoceran, *Ceriodaphnia dubia* . The calculated Acute Target In-stream Waste Concentration (TIWCa) is 62%.

Chronic Testing

The permittee must perform quarterly WET tests to generate chronic toxicity data on the cladoceran, *Ceriodaphnia dubia* and the fathead minnow, *Pimephales promelas* for the permit term. The results shall be reported as No Observed Effect Concentration (NOEC) and Chronic Toxic Units (TUc) with a Percent Minimum Significant Difference (PMSD) reported. The results shall also be reported as Inhibitory Concentration, 25 percent (IC_{25}). The testing should follow USEPA guidance on Short-Term Methods for Estimating the Chronic

Toxicity of Effluents and Receiving Waters to Freshwater Organisms (EPA 821-R-02-013, 4th Edition, 2002). The dilution series to be used is 100%, 50%, 25%, 12.5% and 6.25%. The calculated Chronic Target In-stream Waste Concentration (TIWCc) is 18%.

The complete laboratory reports with a summary page of results from the testing must be submitted to the DRBC and DEP at the addresses listed below:

Dr. Thomas Fikslin
Delaware River Basin Commission
P.O. Box 7360
West Trenton, NJ 08628-0360

Department of Environmental Protection
Clean Water Program
2 East Main Street
Norristown, PA 19401

III. POTW PRETREATMENT PROGRAM IMPLEMENTATION

A. General Requirement – The permittee shall operate and implement a POTW pretreatment program in accordance with the federal Clean Water Act, the Pennsylvania Clean Streams Law, and the federal General Pretreatment Regulations at 40 CFR Part 403. The program shall also be implemented in accordance with the permittee's approved pretreatment program and any modifications thereto submitted by the permittee and approved by the Approval Authority.

B. Annual Report and Other Requirements – The permittee shall submit a Pretreatment Annual Report by March 31 of each year to EPA that describes the permittee's pretreatment activities for the previous calendar year. The Pretreatment Annual Report shall include a description of pretreatment activities in all municipalities from which wastewater is received at the permittee's POTW. A summarized discussion shall be incorporated into the permittee's Annual Municipal Wasteload Management Report required by 25 Pa. Code Chapter 94 and referenced in Part B I.C.4 of this permit. The Pretreatment Annual Report shall include the following information, at minimum:

1. Industrial Listing – The Annual Report shall contain an updated industrial listing providing the names and addresses of all current Significant Industrial Users (SIUs) and Non-Significant Categorical Industrial Users (NSCIUs), as defined in 40 CFR 403.3, and the categorical standard, if any, applicable to each. The listing must: (1) identify any users that are subject to reduced reporting requirements under 40 CFR 403.12(e)(3); (2) identify which users are NSCIUs; (3) identify any users that have been granted a monitoring waiver in accordance with 40 CFR 403.12(e)(2) as well as the pollutants for which the waiver was granted and the date of the last POTW sampling event for each pollutant; and (4) identify any categorical industrial users that have been given mass-based limits in place of concentration-based categorical limits in accordance with 40 CFR 403.6(c)(5) or concentration-based limits in place of mass-based categorical limits in accordance with 40 CFR 403.6(c)(6).

   In addition, the Annual Report shall contain a summary of any hauled-in wastes accepted at the POTW including the source of the wastes (domestic, commercial or industrial) and the receiving location for acceptance of the wastes. For each industrial source (whether or not classified as an SIU), the report shall indicate (1) the name and address of the industrial source; (2) the average daily amount of wastewater received; (3) a brief description of the type of process operations conducted at the industrial facility; (4) whether the source facility is a categorical industrial user (including NSCIU), significant industrial users, or non-significant industrial user; and (5) any controls imposed on the user.

2. Control Mechanism Issuance – The Annual Report shall contain a summary of SIU control mechanism issuance, including a list of issuance, effective, and expiration dates for each SIU control mechanism. For each general control mechanism issued, provide the names of all SIUs covered by the general control mechanism and an explanation of how the users meet the criteria of 40 CFR 403.8(f)(1)(iii)(A) for issuance of a general control mechanism.

3. Sampling and Inspection – The Annual Report shall contain a summary of the number and types of inspections and sampling events of SIUs by the permittee, including a list of all SIUs either not sampled or not inspected, and the reason that the sampling and/or inspection was not conducted. For any user subject to reduced reporting under 40 CFR 403.12(e)(3), the list shall include the date of the last POTW sampling event and the date of the last POTW inspection of the user. In addition, the report shall include a summary of the number of self-monitoring events conducted by each SIU and the number required to be conducted, including a list of all SIUs that did not submit the required number of reports and the reason why the reports were not submitted. For NSCIUs, the report shall provide the date of the compliance certification required under 40 CFR 403.12(q).

4. Industrial User Compliance and POTW Enforcement – The Annual Report shall contain a summary of the number and type of violations of pretreatment standards and requirements, including local limits, and the actions taken by the permittee to obtain compliance, including compliance schedules, penalty assessments and actions for injunctive relief. The report shall state whether each SIU was in significant noncompliance, as that term is defined in 40 CFR Section 403.8(f)(2)(viii), and include the parameter(s) in violation, the period of violation, the actions taken by the POTW in response to the violations, and the compliance status at the end of the reporting period. A copy of the publication of users meeting the significant noncompliance criteria shall be included. In addition, the report shall provide a list of users previously designated as NSCIUs that have violated (to any extent) any pretreatment standard or requirement during the year and the date and description of the violation(s).

5. Summary of POTW Operations – The Annual Report shall contain a summary of any interference, pass-through, or permit violations by the POTW and indicate the following: (1) which, if any, permit violations may be attributed to industrial users; (2) which IU(s) are responsible for such violations; and (3) the actions taken to address these events. The report shall also include all sampling and analysis of POTW treatment plant influent, effluent, and sludge conducted during the year for local limit and priority pollutants identified pursuant to Section 303(d) of the Clean Water Act, 33 U.S.C. 1313(d).

6. Pretreatment Program Changes – The Annual Report shall contain a summary of any changes made or proposed to the approved program during the period covered by the report and the date of submission to the Approval Authority.

C. Routine Monitoring – The permittee shall conduct monitoring at its treatment plant that, at a minimum, includes quarterly influent, effluent, and sludge analysis for all pollutants for which local limits have been established, and an annual priority pollutant scan for influent and sludge.

D. Notification of Pass Through or Interference – The permittee shall notify EPA and DEP, in writing, of any instance of pass through or interference, as defined at 40 CFR 403.3(p) and (k), respectively, known or suspected to be related to a discharge from an IU into the POTW. The notification shall be attached to the DMR submitted to EPA and DEP and shall describe the incident, including the date, time, length, cause (including responsible user if known), and the steps taken by the permittee and IU (if identified) to address the incident. A copy of the notification shall also be sent to the EPA at the address provided below.

E. Adopt Local Limits – The permittee shall adopt the revised local limits within 60 days of EPA approval of local limits and notify all contributing municipalities and industrial users of the revised local limits.

F. Changes to Pretreatment Program – EPA and DEP may require the permittee to submit for approval changes to its pretreatment program if any one or more of the following conditions is present:

1. The program is not implemented in accordance with 40 CFR Part 403;

2. Problems such as interference, pass through or sludge contamination develop or continue;

3. The POTW proposes to introduce new pollutants or an increased loading of approved pollutants as described in Part A III.C.2 of this permit;

4. Federal, State, or local requirements change;

5. Changes are needed to assure protection of waters of the Commonwealth.

Program modification is necessary whenever there is a significant change in the operation of the pretreatment program that differs from the information contained in the permittee's submission, as approved under 40 CFR 403.11.

G. Procedure for Pretreatment Program Changes – Upon submittal by the permittee, and written notice of approval by the Approval Authority to the permittee of any changes to the permittee's approved pretreatment program, such changes are effective and binding upon the permittee unless the permittee objects within 30 days of receipt of the written notice of approval. Any objection must be submitted in writing to EPA and DEP.

H. Correspondence – The Approval Authority shall be EPA at the following address:

Pretreatment Coordinator (3WP41)
U.S. Environmental Protection Agency
1650 Arch Street
Philadelphia, PA 19103-2029

IV. REQUIREMENTS APPLICABLE TO STORMWATER OUTFALLS

A. Prohibition of Nonstormwater Discharges

1. Except as provided in A.2, all discharges to stormwater Outfalls 028, 029,030, and 031 shall be composed entirely of stormwater and allowable nonstormwater as specified in A.2 below.

2. The following nonstormwater discharges may be authorized, provided the discharge is in compliance with D.2.b: discharges from fire fighting activities; fire hydrant flushings, potable water sources, including waterline flushings, irrigation drainage, lawn watering, routine external building washdown which does not use detergents or other compounds, pavement washwaters where spills or leaks of toxic or hazardous materials have not occurred (unless all spilled material has been removed) and where detergents are not used, air conditioning condensate, springs, uncontaminated groundwater, and foundation or footing drains where flows are not contaminated with process materials such as solvents.

B. Spills

This permit does not authorize the discharge of any polluting substances resulting from an on-site spill. Such spills shall be controlled through proper implementation of a Preparedness, Prevention, and Contingency (PPC) Plan as stated in Section D below.

C. This permit does not authorize any discharge (stormwater or nonstormwater) containing any pollutant that may cause or contribute to an impact on aquatic life or pose a substantial hazard to human health or the environment due to its quantity or concentration.

D. Preparedness, Prevention, and Contingency Plans

1. Development of Plan

Operators of facilities shall have developed a PPC Plan in accordance with 25 Pa. Code Section 91.34 and the "Guidelines for the Development and Implementation of Environmental Emergency Response Plans." The PPC Plan shall identify potential sources of pollution that may reasonably be expected to affect the quality of stormwater discharges from the facility. In addition, the PPC Plan shall describe the BMPs that are to be used to reduce the pollutants in stormwater discharges at the facility ensuring compliance with the terms and conditions of this permit. The PPC Plan shall be completed within 150 days from the permit effective date, if it has not been completed yet or if it needs an update.

2. Nonstormwater Discharges

   a. The PPC Plan shall contain a certification that the discharge has been tested or evaluated for the presence of nonstormwater discharges. The certification shall include the identification of potential significant sources of nonstormwater at the site, a description of the results of any test and/or evaluation for the presence of nonstormwater discharges, the evaluation criteria or testing methods used, the date of any testing and/or evaluation, and the on-site drainage points that were directly observed during the test. Such certification may not be feasible if the facility operating the stormwater discharge does not have access to an outfall, manhole, or other point of access to the ultimate conduit that receives the discharge. In such cases, the source identification section of the PPC Plan shall indicate why the certification was not feasible. A discharger that is unable to provide the certification must notify the DEP within 90 days of the effective date of this permit.

   b. Except for flows from fire fighting activities, sources of nonstormwater listed in A.2. (authorized nonstormwater discharges) that are combined with stormwater discharges must be identified in the Plan. The Plan shall identify and ensure the implementation of appropriate pollution prevention measures for the nonstormwater component(s) of the discharge.

3. Special Requirements for SARA Title III, Section 313 Facilities

   a. Facilities subject to SARA Title III, Section 313 shall include in the PPC Plan a description of releases to land or water of Section 313 water priority chemicals that have occurred within the last three years. Each of the following shall be evaluated for the reasonable potential for contributing pollutants to runoff: loading and unloading operations, outdoor storage activities, outdoor manufacturing or processing activities, significant dust or particulate generating process, and on-site waste disposal practices. Factors to consider include the toxicity of chemicals; quantity of chemicals used, produced or discharged; the likelihood of contact with stormwater; and history of significant leaks or spills of toxic or hazardous pollutants.

   b. Engineering Certification. No stormwater PPC Plan for facilities subject to SARA Title III, Section 313 requirements for chemicals that are classified as "Section 313 water priority chemicals" shall be effective unless it has been reviewed by a Registered Professional Engineer and certified to by such Professional Engineer. A Registered Professional Engineer shall recertify the PPC Plan every year thereafter. This certification may be combined with the required annual evaluation in D.4. By means of these certifications, the engineer, having examined the facility and being familiar with the provisions of this part, shall attest that the storm water PPC Plan has been prepared in accordance with good engineering practices. Such certification shall in no way relieve the owner or operator of a facility covered by the PPC Plan of the duty to prepare and fully implement such Plan.

4. Comprehensive Site Compliance Evaluations and Recordkeeping

   Qualified personnel shall conduct site compliance evaluations at least once a year. Such evaluations shall include:

   a. Visual inspection and evaluation of areas contributing to a stormwater discharge for evidence of, or the potential for, pollutants entering the drainage system. Measures to reduce pollutant loadings shall be evaluated to determine whether they are adequate and properly implemented in accordance with the terms of the permit or whether additional control measures are needed. Structural stormwater management measures, sediment and erosion control measures, and other structural pollution prevention measures identified in the Plan shall be observed to ensure that they are operating correctly. A visual inspection of equipment needed to implement the Plan, such as spill response equipment, shall be made.

   b. Based on the results of the inspection, the description of potential pollutant sources identified in the PPC Plan, and pollution prevention measures and controls identified in the Plan shall be revised as appropriate within 15 days of such inspection and shall provide for implementation of any changes to the Plan in a timely manner, but in no case more than 90 days after the inspection.

c. A report summarizing the scope of the inspection, using the DEP's Annual Inspection form shall be completed and made available upon request and retained as part of the PPC Plan for at least one year after coverage under this permit terminates.

E. Stormwater Sampling and Reporting

1. If stormwater samples are required by this permit, they shall be collected as grab samples during the first 30 minutes, but no later than one-hour of the discharge resulting from a storm event that occurs at least 72 hours from the previously measurable storm event.

2. When the discharger is unable to collect samples due to adverse climatic conditions, the discharger must submit, in lieu of sampling data, a description of why samples could not be collected, including available documentation of the event. This sampling waiver may not be used more than once during a two-year period.

3. Stormwater monitoring results shall be summarized on a DMR form and the DEP's "Additional Information for the Reporting of Stormwater Monitoring" form.

4. When a facility has two or more outfalls that may reasonably be believed to discharge substantially identical effluents, based on a consideration of features and activities within the area drained by the outfall, the permittee may sample one such outfall and report that the quantitative data also applies to the substantially identical outfalls.

   Outfall 028 has been determined to be representative of Outfalls 029, 030, and 031.

5. The following table describes the outfall locations and drainage areas:

Outfall No.	Acreage	Latitude	Longitude	Area Description
028	7.5	39° 49' 30"	75° 23' 45"	Primary treatment units and parking area around the administrative buildings (B2 and B5).
029	11.25	39° 49' 30"	75° 23' 30"	Primary treatment units, sludge storage and processing, truck loading, and waste storage.
030	6.25	39° 49' 30"	75° 23' 45"	Secondary treatment units.
031	6.25	39° 49' 30"	75° 23' 30"	Secondary treatment units, and former ash lagoon.

F. Stormwater Best Management Practices (BMPs)

The permittee shall implement at least the following BMPs:

- Manage sludge in accordance with all applicable permit requirements; temporarily collect and store sludge in enclosed containers or tanks.

- Store chemicals in secure and covered areas on impervious surfaces away from storm drains.

- For new facilities and improvements: Design wastewater treatment facilities to avoid, to the maximum extent practicable, storm water commingling with sanitary wastewater.

- Efficiently use herbicides for weed control; where practicable, investigate use of the least toxic herbicides; do not apply during windy conditions.

- Do not wash parts or equipment over impervious surfaces that wash into storm drains.

- Conduct Good Housekeeping Practices.

- Implement infiltration techniques, including infiltration basins, trenches, dry wells, porous pavements, etc., wherever practicable.

V. COMBINED SEWER OVERFLOWS

A. Management and Control of Combined Sewer Overflows

1. CSOs are point source discharges that must be provided control measures in accordance with the Federal Clean Water Act and the 1994 National CSO Policy. The point source discharges listed on PART A serve as combined sewer reliefs necessitated by stormwater entering the sewer system and exceeding the hydraulic capacity of the sewers and/or the treatment plant. CSOs are allowed to discharge only when flows in combined sewer systems exceed conveyance or treatment capacities of the system during wet weather periods. Dry weather overflows are prohibited.

2. Water bodies receiving CSO discharges in the DELCORA-STP service area covering this permit include the Delaware River, Chester, and Ridley Creeks.

B. Continued Implementation of Technology-Based Nine Minimum Controls

The permittee shall submit an annual report by March 31 each year to the DEP, with the appropriate documentation, demonstrating continued implementation of and compliance with the following nine minimum technology-based controls (NMCs) required on a system wide basis:

1. Proper Operation and Maintenance

2. Maximum Use of the Collection System

Where possible, DELCORA shall maximize the in-line storage capacity of the collection system, and shall keep records to document implementation.

3. Review/Modification of pre-treatment program

DELCORA shall continue to implement selected CSO controls to minimize the impact of nondomestic discharges on CSOs. DELCORA shall reevaluate, at an appropriate frequency, whether additional modifications to its pretreatment program are feasible or of practical value. DELCORA shall keep records to document this evaluation and implementation of the selected CSO controls to minimize CSO impacts resulting from nondomestic discharges.

4. Maximization of flow to the POTW for treatment

DELCORA shall operate the POTW treatment plant at maximum treatable flow during wet weather flow conditions/events and deliver all flows to the treatment plant within the constraints of the capacity of the localized conveyance capacities of the sewer system and the capacity of the treatment plant. DELCORA shall keep records to document these actions.

5. Elimination of dry weather CSOs

Dry weather overflows from CSO outfalls are prohibited. When DELCORA detects a dry weather overflow, corrective action work shall begin immediately. DELCORA shall inspect the dry weather overflow each subsequent day until the overflow has been eliminated. DELCORA shall record dry weather overflows in the inspection logbook. Recorded information shall include the cause of the overflow, corrective measures taken, and the dates of the beginning and cessation of the overflow.

6. Controls of solids and floatables:

   DELCORA shall implement measures to control solids and floatable materials in the CSOs. These measures shall include, but are not be limited to:

   a. Augmentation of the City of Chester's storm sewer inlet replacement program to reimburse the City for inlets it replaces beyond those currently funded up to an amount not to exceed $75,000 per year for a 12-year period.

   b. Increasing public awareness through public education and information programs.

7. Pollution prevention programs

   DELCORA shall implement a pollution prevention program focused on reducing the impact of CSOs on receiving waters. DELCORA shall keep records to document pollution prevention implementation activities.

8. Public notification of CSO occurrence/impacts:

   DELCORA shall continue to implement a public notification plan to inform citizens of when and where CSOs occur. The process must include:

   a. A series of sensors and a model to determine the duration and amount of discharge to the receiving water body.

   b. Maintain, where accessable to the public, CSO outfall signage to indicate locations of CSOs.

   c. Inform the public through an annual newsletter or brochure describing CSO issues, the LTCP, and project benefits or sewer impact issues

9. Monitoring to effectively Characterize CSO Impacts and the Efficiency of CSO Controls:

   The permittee shall report on the status and effectiveness of each of the NMCs in the Annual "CSO" Status Report. The permittee shall incorporate "CSO" discharge characterizations in its comprehensive watershed assessment program to assess program performance.

C. Implementation of Water Quality-Based Long Term Control Plan (LTCP)

1. DELCORA submitted the updated Long Term Control Plan to EPA on February 1, 2011. DELCORA shall continue implementation of the April 1999 LTCP and July 2008 addendum to the LTCP until the updated plan is approved. Implementation of the updated plan shall result in compliance with water quality standards. The updated LTCP must be in accordance with the 1994 National CSO Control Policy.

2. The LTCP requires Public Participation in accordance with EPA Guidance Document No. EPA 832-B-95-002, entitled "*Guidance for Long Term Control Plan.*"

3. The permittee shall implement Phases I and II of the existing LTCP in accordance with the following schedule:

   a. Phase I - Implementation of the Nine Minimum Controls (NMC). Implementation of the NMC is currently underway and shall continue in accordance with DELCORA's *CSO* Documentation:

Delaware County Regional Water Quality Control Authority (DELCORA) Western Regional Treatment Plant (WRTP) Nine (9) Minimum Controls (NMC) for Correction of Combined Sewer Overflows (CSO), Manual, dated July 1995.

b. Phase II - Completion of Capital Improvements Projects - Implementation of the Capital Improvements shall be in accordance with the CSO LTCP schedule. The projects and estimated completion dates are as follows:

LTCP Reference (April 1999)				
Project			**Page**	**Completion Date**
1.	Regulator Replacement and Tide Gate Monitoring:			
	a.	Replace all McNulty Regulators, at least one per year, with Brown and Brown regulators.	6-2	See Below
	b.	Install regulator and tide gate monitoring system on newly installed Brown and Brown regulators.	6-1	See Below

Regulator Replacement and Tide Gate Monitoring System Installation Schedule (Per July 2008 LTCP addendum)

i. DELCORA has replaced the following Regulators since LTCP was approved in 1999:

Regulator Nos.	Location	Receiving Water Body	Descriptions (Regulator Size, Type and back Flow devices)
002	Front and Booth	Delaware River	5" x 7½" Brown & Brown
003	Front and Highland	Delaware River	7½" x 7¾" Brown & Brown
005	Front and Townsend	Delaware River	12" x 12" Brown & Brown with Double Tide Gate
008	2nd and Tilghman	Delaware River	7½" x 12⅜" Brown & Brown with Double Tide Gate
009	2nd and Lloyd	Delaware River	7½" x 12⅜" Brown & Brown with Double Tide Gate
011	2nd and Parker	Delaware River	5" x 9¼" Brown & Brown
012	2nd and Edgmont	Chester Creek	Brown & Brown with 24" x 24" Rubber Tide Gate
016	8th and McDowell	Ridley Creek	7½" x 12⅜" Brown & Brown with Double 60" x 60" Rubber Tide Gate
020	Kerlin and Finland	Chester Creek	7½" x 7¾" Brown & Brown
021	9th and Sproul	Chester Creek	7½" x 7¾" Brown & Brown with Double 18" x 18" Rubber Tide Gate
022	6th and Sproul	Chester Creek	5" x 6" Brown & Brown
023	3rd and Edgmont	Chester Creek	7½" x 7¾" Brown & Brown with Double 36" x 36" Rubber Tide Gate
024	3rd and Dock	Chester Creek	5" x 9¼" Brown & Brown with Double 48" x 48" Rubber Tide Gate
025	5th and Penn	Chester Creek	5" x 6" Brown & Brown with Double 36" x 36" Rubber Tide Gate
026	7th and Penn	Chester Creek	7½" x 12⅜" Brown & Brown

ii. The following Regulator replacement (Capital Improvement Projects) is planned beyond year 2012:

Completion Year	Regulator Nos.	Location	Receiving Water Body	Descriptions (Regulator Size, Type, and Back Flow Devices)
2014	013	2nd and Welsh	Delaware River	8" McNulty
2015	010	5th and Pusey	Delaware River	12" McNulty
2017	014	3rd and Upland	Delaware River	8" McNulty
2018	004	Front and Hayes	Delaware River	8" McNulty with Duckbill
2020	018	Sun Drive and Hancock	Ridley Creek	5" x 6" Brown & Brown with Tide Gate
2021	017	9th and Campbell	Ridley Creek	5" x 6" Brown & Brown with Single Neehah Cast Iron Tide Gate
2022	015	4th and Melrose	Ridley Creek	5" x 6" Brown & Brown with Single Neehan No. R-50-50-SF-36 Tide Gate
2023	007	Delaware and Reaney	Delaware River	5" x 6" Brown & Brown
2024	019	14th and Crozer Hospital	Chester Creek	7½" x 15⅜" Brown & Brown

The DEP recognizes that the estimated completion dates for the capital improvement projects contained in this permit may not be achieved as a result of factors beyond the permitte's reasonable controls, such as force majeure events. Such force majeure events include, but is not limited to, weather delays, labor actions, poor, or untimely performance by the permittee's contractors, changes to the construction plans, or methods of construction which could not be seen reasonable foreseen by the permitted, etc. Should a force majeure event occur, the DEP may extend the estimated completion date so as to compensate the permitted for the time lost due to force majeure event.

LTCP Reference (April 1999)			
	Project	**Page**	**Completion Date**
2.	Inlet Replacement:	4-5 and 6-3	*
3.	Modified Sewer Cleaning Program:		
	Implement the modified sewer cleaning program as developed in CY2000.	6-3	Ongoing Basis
4.	Ongoing Monitoring Program Impacts:		
	Implement ongoing monitoring program.	6-6	Ongoing Basis
5.	Public Information/Education Program:		
	Update newsletter describing CSO Issues, the LTCP and project benefits	6-4	**

*DELCORA shall augment the City of Chester's storm sewer replacement program by reimbursing the city for inlets it replaces beyond those currently funded up to an amount not to exceed $75,000 per year for a

period of 12 years. It is intended that the inlets replaced with these funds be located in areas with severe debris problems or in areas tributary to Chester or Ridley Creeks.

**DELCORA shall continue mailing newsletter by August 31 annually describing CSO issues as detailed in nine Minimum Control Plans, under the LTCP, and the projected benefits of the program on an ongoing basis. Public input will be considered in an annual program review conducted by DELCORA.

D. Ongoing Monitoring Program:

DELCORA shall monitor the wastewater at the following three locations within 30 minutes of a rainfall and submit a report to the DEP, within 28 days of the sampling event:

1. 2nd and Dock Streets Pump Station (sample wet well).

2. CSO Outfall 018 – Sun Drive and Hancock Street.

3. CSO Outfall 019 – 14th Street and Crozer Hospital.

The monitoring frequency, parameters, and sample type are as follows:

Parameter	Sample Type	Measurement Frequency
Biological Oxygen Demand (BOD)	Grab (mg/l)	Annual
Ammonia	Grab (mg/l)	Annual
Total Suspended Solids	Grab (mg/l)	Annual
Phosphorus	Grab (mg/l)	Annual
Fecal Coliform	Grab (#/100 ml)	Annual

Grab samples shall be collected within first 30 minutes of the discharge.

E. Reporting Requirements:

1. LTCP Implementation

The permittee shall submit an annual report by March 31 each year that describes the efforts to date on Phase II projects to include information on future planned activities.

2. Special Reporting Forms:

The permittee shall continue to record and submit monthly, CSO discharges and related data on DEP approved CSO Supplemental Report forms - Monthly Inspection Report and Detailed Outfall Report (copies attached).

3. Annual CSO Status Report:

The permittee shall submit an annual Chapter 94, "Municipal Wasteload Management Report." The report shall provide a summary of the frequency, duration, and volume of the CSOs discharges for the past calendar year, the operational status of major overflow point and an identification of known or potential instream water quality impacts and their cause. The report shall also summarize all actions to implement the approved Plan of Actions and their effectiveness, and shall evaluate and provide necessary revisions to the Plan of Actions approved by DEP. Specifically, the following information shall be included in the report:

a. Rain gauge data

Total inches (to the nearest 0.01 inch) that fell each day and month for the period of the report.

b. Inspections and maintenance

Total number of regulator inspections conducted during the period of the report (reported by the drainage system).

A list of blockages (if any) corrected or other interceptor maintenance performed, including location, date and time discovered, date and time corrected, and any discharges to the stream observed and/or suspected to have occurred.

c. Dry weather overflows

For all dry weather overflows, indicate location, date and time discovered, date and time corrected/ceased, and action(s) taken to prevent their reoccurrence.

d. Wet weather overflows

For all locations that have automatic level monitoring of the regulators, report all exceedances of the overflow level during the period of the report, including location, date, time, and duration of wet weather overflows.

e. Chronic or continuous discharges

Provide the status and corrective actions taken at all sites identified as being chronic or continuous discharges including an estimate of the flow and duration during the month covered by the report.

f. Benefit to the estuary

Provide information, with supporting data, that describes how treating flows in excess of the plants design maximum daily flow has been a benefit to the estuary.

The report shall be submitted to:

Program Manager
Clean Water Program
Department of Environmental Protection
2 East Main Street
Norristown, PA 19401

Water Protection Division
U.S. Environmental Protection Agency
Region III
1650 Arch Street
Philadelphia, PA 19103-2029

F. Prohibition of SSOs:

Unless otherwise authorized under PART B of this permit, any discharge from any point other than a permitted treatment plant outfall or permitted combined sewer system outfalls is prohibited. In the event there is a prohibited discharge from a sewer conveyance system, notify every such discharge to the DEP immediately and report on your monthly DMR in the remarks block. Indicate the date of discharge, volume and duration of discharge and action taken to cease the discharge.

3800-FM-BPNPSM0462 3/2012

pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF POINT AND NON-POINT SOURCE MANAGEMENT
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

PERMITTEE NAME/ADDRESS

NAME DELCORA STP
CLIENT DELCORA
ADDRESS 100 East Fifth Street
Chester, PA 19016-0999
LOCATION Chester City
Delaware County
WATERSHED 3-G

PA0027103	001
PERMIT NUMBER	OUTFALL NUMBER

MONITORING PERIOD						
YEAR	MO	DAY	TO	YEAR	MO	DAY

INTERIM

Reporting Frequency: Monthly
DMR Effective From: May 1, 2013
DMR Effective To: March 31, 2018
Permit Expires: April 30, 2018
Permit Application Due: November 1, 2017.

___ Check Here if No Discharge

NOTE: Read Instructions before completing this form

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		VALUE	VALUE	UNITS	VALUE	VALUE	VALUE	UNITS			
Flow	SAMPLE MEASUREMENT				*****	*****	*****				
	PERMIT REQUIREMENT	Report Avg Mo	Report Daily Max	MGD	*****	*****	*****	*****		Continuous	Metered
pH	SAMPLE MEASUREMENT	*****	*****			*****					
	PERMIT REQUIREMENT	*****	*****	*****	6.0 Inst Min	*****	9.0 IMAX	S.U.		1/day	Grab
Total Residual Chlorine	SAMPLE MEASUREMENT	*****	*****		*****						
	PERMIT REQUIREMENT	*****	*****	*****	*****	0.5 Avg Mo	1.0 IMAX	mg/L		1/day	Grab
CBOD5	SAMPLE MEASUREMENT				*****						
	PERMIT REQUIREMENT	7,000 Avg Mo	10,500 Wkly Avg	lbs/day	*****	19 Avg Mo	29 Wkly Avg	mg/L		1/day	24-Hr Composite
CBOD5 Raw Sewage Influent	SAMPLE MEASUREMENT		*****		*****		*****				
	PERMIT REQUIREMENT	Report Avg Mo	*****	lbs/day	*****	Report Avg Mo	*****	mg/L		1/day	24-Hr Composite
BOD5 Raw Sewage Influent	SAMPLE MEASUREMENT		*****		*****		*****				
	PERMIT REQUIREMENT	Report Avg Mo	*****	lbs/day	*****	Report Avg Mo	*****	mg/L		1/week	24-Hr Composite
CBOD20 Percent Removal	SAMPLE MEASUREMENT	*****	*****			*****	*****				
	PERMIT REQUIREMENT	*****	*****	*****	89.25 Min % Removal	*****	*****	%		1/week	24-Hr Composite

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COMMENTS *(Report all violations on the "Non-Compliance Reporting Form")*

3800-FM-BPNPSM0462 3/2012

pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF POINT AND NON-POINT SOURCE MANAGEMENT
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

PERMITTEE NAME/ADDRESS

NAME DELCORA STP
CLIENT DELCORA
ADDRESS 100 East Fifth Street
Chester, PA 19016-0999
LOCATION Chester City
Delaware County
WATERSHED 3-G

PA0027103	001
PERMIT NUMBER	OUTFALL NUMBER

MONITORING PERIOD						
YEAR	MO	DAY	TO	YEAR	MO	DAY

INTERIM

Reporting Frequency: Monthly
DMR Effective From: May 1, 2013
DMR Effective To: March 31, 2018
Permit Expires: April 30, 2018
Permit Application Due: November 1, 2017

___ Check Here if No Discharge

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PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		VALUE	VALUE	UNITS	VALUE	VALUE	VALUE	UNITS			
	SAMPLE MEASUREMENT		*****		*****	*****	*****				
CBOD20	PERMIT REQUIREMENT	10,500 Avg Mo	*****	lbs/day	*****	*****	*****	*****		1/week	24-Hr Composite
	SAMPLE MEASUREMENT				*****						
Total Suspended Solids	PERMIT REQUIREMENT	11,000 Avg Mo	16,500 Wkly Avg	lbs/day	*****	30 Avg Mo	45 Wkly Avg	mg/L		1/day	24-Hr Composite
	SAMPLE MEASUREMENT		*****		*****		*****				
Total Suspended Solids Raw Sewage Influent	PERMIT REQUIREMENT	Report Avg Mo	*****	lbs/day	*****	Report Avg Mo	*****	mg/L		1/day	24-Hr Composite
	SAMPLE MEASUREMENT	*****	*****		*****						
Total Dissolved Solids	PERMIT REQUIREMENT	*****	*****	*****	*****	Report Avg Mo	Report Daily Max	mg/L		2/month	24-Hr Composite
	SAMPLE MEASUREMENT		*****		*****						
Oil and Grease	PERMIT REQUIREMENT	5,500 Avg Mo	*****	lbs/day	*****	15 Avg Mo	30 IMAX	mg/L		1/day	Grab
	SAMPLE MEASUREMENT	*****	*****		*****						
Fecal Coliform May 1 - Sep 30	PERMIT REQUIREMENT	*****	*****	*****	*****	200 Geo Mean	1,000 IMAX	CFU/ 100 ml		1/day	Grab
	SAMPLE MEASUREMENT	*****	*****		*****						
Fecal Coliform Oct 1 - Apr 30	PERMIT REQUIREMENT	*****	*****	*****	*****	200 Geo Mean	1,000 IMAX	CFU/ 100 ml		1/day	Grab

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		VALUE	VALUE	UNITS	VALUE	VALUE	VALUE	UNITS			
	SAMPLE MEASUREMENT	*****	*****		*****		*****				
Ammonia-Nitrogen	PERMIT REQUIREMENT	*****	*****	*****	*****	Report Avg Mo	*****	mg/L		2/month	24-Hr Composite
	SAMPLE MEASUREMENT	*****	*****		*****						
Nitrate as N	PERMIT REQUIREMENT	*****	*****	*****	*****	Report Avg Mo	Report Daily Max	mg/L		2/month	24-Hr Composite
	SAMPLE MEASUREMENT	*****	*****		*****						
Nitrite as N	PERMIT REQUIREMENT	*****	*****	*****	*****	Report Avg Mo	Report Daily Max	mg/L		2/month	24-Hr Composite
	SAMPLE MEASUREMENT	*****	*****		*****		*****				
Total Kjeldahl Nitrogen	PERMIT REQUIREMENT	*****	*****	*****	*****	Report Avg Mo	*****	mg/L		2/month	24-Hr Composite
	SAMPLE MEASUREMENT	*****	*****		*****		*****				
Total Cadmium	PERMIT REQUIREMENT	*****	*****	*****	*****	Report Avg Mo	*****	mg/L		1/month	24-Hr Composite
	SAMPLE MEASUREMENT	*****	*****		*****		*****				
Total Copper	PERMIT REQUIREMENT	*****	*****	*****	*****	Report Avg Mo	*****	mg/L		1/month	24-Hr Composite
	SAMPLE MEASUREMENT	*****	*****		*****		*****				
Total Cyanide	PERMIT REQUIREMENT	*****	*****	*****	*****	Report Avg Mo	*****	mg/L		1/month	24-Hr Composite

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Total Lead	SAMPLE MEASUREMENT	*****	*****		*****		*****				
	PERMIT REQUIREMENT	*****	*****	*****	*****	Report Avg Mo	*****	mg/L		1/month	24-Hr Composite
Total Zinc	SAMPLE MEASUREMENT	*****	*****		*****		*****				
	PERMIT REQUIREMENT	*****	*****	*****	*****	Report Avg Mo	*****	mg/L		1/month	24-Hr Composite
Chlorodibromomethane	SAMPLE MEASUREMENT	*****	*****		*****		*****				
	PERMIT REQUIREMENT	*****	*****	*****	*****	Report Avg Mo	*****	mg/L		1/month	Grab
Dichlorobromomethane	SAMPLE MEASUREMENT	*****	*****		*****		*****				
	PERMIT REQUIREMENT	*****	*****	*****	*****	Report Avg Mo	*****	mg/L		1/month	Grab
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
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