

*Binding Proposal, Execution Copy*

**MIDDLETOWN BOROUGH AUTHORITY  
WATER AND WASTEWATER  
UTILITY SYSTEM  
CONCESSION AND LEASE AGREEMENT**

**OPERATING STANDARDS**

**SEPTEMBER 2014**

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**Introduction**

The Middletown Borough Authority has included Operating Standards for both the water and wastewater systems as part of the Municipal Water and Wastewater Utility System Concession and Lease Agreement (Agreement) to ensure the quality of water delivered to Authority Water System customers, the protection of the water bodies receiving treated Wastewater Utility System effluent, and for the long-term protection of the Authority's water and sewer infrastructure during the term of the Agreement. Operating Standards for the Water Plant and Distribution System (Water System) and Wastewater System (Wastewater or Sewer System) (together the Water System and the Wastewater System are sometimes referred to as the Systems) are provided herein as Part A and Part B, respectively. These Operating Standards are attached to and incorporated into the Agreement.

The Operating Standards set forth the Concessionaire's obligations with respect to operation and maintenance of the Water and Sewer Systems, and require the Concessionaire to submit regular reports to the Authority and its Oversight Committee regarding system performance, operation and maintenance activities, Capital Improvements, customer service practices, and other activities. The Concessionaire will be subject to periodic evaluations with respect to the condition, operation, and improvement requirements for the System. The process for implementing Capital Improvements is set forth in the Agreement. The Authority also will retain all rights to inspect the facilities and review records to ensure the long-term viability of the Systems.

The Authority intends to establish a Committee responsible for oversight of the Water and Sewer Systems operation and maintenance, as well as customer service and customer satisfaction. The Authority shall receive copies of all reports, correspondence and other documentation submitted by the Concessionaire to any regulatory or oversight agency including, but not limited to, United States Environmental Protection Agency (USEPA), Pennsylvania Department of Environmental Protection (PaDEP), Susquehanna River Basin Commission (SRBC), and any other government or other oversight agency that may have jurisdiction, relative to the Systems. Such reports shall be provided promptly to the Authority and shall include a brief executive summary of the document. The Concessionaire shall provide to the Authority any and all correspondence delivered to or received from regulatory and/or oversight agencies which might be of consequence to the Authority as Owner. The Authority shall maintain the right, as the owner of the Systems, to attend meetings and conference calls with regulatory and other agencies.

These Operating Standards shall be enforceable in accordance with the terms of the Agreement. The Concessionaire shall be responsible for any and all penalties assessed by regulatory or other agencies relative to the Systems during the term of the Agreement, provided such penalties were not caused by the Authority's action or inaction. In addition, in accordance with the terms of the Agreement, the Authority may assess Operational Liquidated Damages (OLDs) for the failure of the Concessionaire to comply with the requirements of these Operating Standards, including, but not limited to, the failure to meet operating performance, maintenance, and/or reporting requirements. These OLDs are in addition to any obligations of the Concessionaire to indemnify the Authority for Losses under the Agreement. Knowingly



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falsifying documentation or omitting information to meet regulatory or Authority reporting and/or technical requirements will cause the Authority to take appropriate actions.

The Authority will make available for the Concessionaire's reference, summaries of regulatory reports submitted by the Borough or the Authority to various agencies. The Authority has also provided a summary of reports that shall be provided by the Concessionaire to the Authority to document compliance with the Operating Standards (Exhibit A). Such reports will be required in addition to regulatory reports the Concessionaire will be required to submit. The Authority has also made available to the Concessionaire a summary of existing software packages (Exhibit B) utilized as part of the operation and maintenance of each system and will make available existing Standard Operating Procedures (SOPs) and other technical information to facilitate the successful transition of operating responsibilities.

The Authority understands that compliance with certain Operating Standards may be difficult following the transition of operating responsibilities to the Concessionaire. Accordingly, the Concessionaire may identify alternative approaches to more efficiently achieve the goals of the Operating Standards, and that relief from certain requirements or appeal of OLDs may be appropriate at times based on occurrences beyond the control of the Concessionaire. Therefore, Part A – Water System Operating Standards Sections 16.0 through 18.0 and Part B – Sewer System Operating Standards Sections 12.0 through 14.0 address procedures for OLD assessment and appeal, alternative approaches presented by the Concessionaire, and the phase-in of certain Operating Standards following the transition of operating responsibilities.

To facilitate the long-term success of the Concession Lease, to maintain a high level of customer service and satisfaction, to protect the long-term viability of Authority-owned assets, and, at the same time, to discuss any issues, concerns, or concepts that the Concessionaire might have, the Operating Standards require, at least, quarterly meetings of the Authority and Concessionaire representatives.

Nothing set forth in these Operating Standards shall modify or alter the Concessionaire's obligation to manage and operate the Water and Sewer Systems in compliance with all applicable laws and the terms of the Agreement. Any capitalized terms not defined herein shall have the meaning set forth in the Agreement.

## **PART A - WATER SYSTEM OPERATING STANDARDS**

### **1.0 General Requirements**

The Concessionaire will be fully responsible for the operation, maintenance, and management of the Water System, water storage tanks, water distribution system, and all associated facilities of the Water System. The Concessionaire shall operate, maintain, and manage the Water System in accordance with the Agreement and applicable laws, regulations, and ordinances, as well as requirements of the Authority. The continuous supply of water in compliance with all applicable regulations is of primary importance. The Concessionaire shall provide uninterrupted operation of the Water System and shall operate the Water System on a continuous basis, 24 hours per day, seven (7) days per week throughout the term of the Agreement. The Concessionaire shall provide meter reading, billing, customer service, and other ancillary services associated with the operation of the System. In addition to activities directly associated with the treatment and distribution of water, the Concessionaire's responsibilities also include all maintenance of grounds, landscaping, buildings, and equipment comprising the Water System. Specific responsibilities are further defined herein.

The Concessionaire shall, at all times, keep the Water System in good repair and working order and shall operate, maintain, and manage the Water System in a professional, efficient, and economical manner. Operational decision making shall always be based on the following overall objectives:

- Protection of health and welfare of the public.
- Protection of the health and safety of the Water System operating staff.
- Preservation of the long-term capability to provide water services in accordance with legal, regulatory, and customer service requirements.
- Protection of the environment.
- Protection and preservation of the Water System equipment and facilities.
- Maximization of Water System operational efficiency.
- Compliance with applicable regulations and requirements of PaDEP, USEPA, SRBC, the Borough, and other government or oversight agencies with applicable jurisdiction.
- Compliance with the Authority's current obligations in accordance with Agreements between the Borough, the Authority and third parties, including other water service providers and adjacent municipal entities, in accordance with the Agreement.

The Concessionaire shall be required to perform the following, subject to the specific terms of the Agreement and the Operating Standards:

- Operate, maintain, and manage the Water System.
- Treat water to maintain regulatory water quality requirements.
- Meet performance standards and permits.
- Perform corrective, predictive, preventative, and ongoing maintenance of the Water System.
- Perform analytical sampling, testing, analyzing, and reporting.
- Maintain necessary records, including laboratory sampling and analysis results, in accordance with regulatory requirements.

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**Operating Standards – Part A – Water System Operating Standards**

- Provide emergency services as soon as reasonably possible associated with the Water System and Water System operation, as required.
- Maintain grounds and buildings of the Water and Wastewater Systems.
- Keep facilities secure and address security measures as identified by the Concessionaire, regulatory agencies, or as part of other security evaluations.
- Keep facilities clean.
- Maintain records documenting compliance with applicable laws, regulations, and ordinances, as well as requirements of the Authority.
- Provide routine reports to the Authority.
- Make available, upon request by the Authority, information necessary to document compliance with applicable laws, regulations, and ordinances as well as compliance with these Operating Standards.
- Subject to the terms and conditions of the Agreement, identify and execute any necessary Capital Improvements to the Water System.

The Authority's existing permits/approvals for the Water System are listed in Exhibit C, for reference. The Agreement also provides a listing of existing permits and designates that all permits shall have the Concessionaire added as co-permittee with the Authority. The Concessionaire shall be obligated, pursuant to the Agreement and as required by law, to fulfill all of the requirements of all such permits maintained by the Authority or the Concessionaire subject to the terms of the Agreement. The Authority will cooperate and participate with the application for required permits and permit renewals for construction and/or operation of the Water System in accordance with these Operating Standards and applicable law, as detailed in the Agreement. Failure to comply with permit conditions and/or the Operating Standards requirements set forth by the Authority may result in the assessment of OLDs, in accordance with the Agreement, in addition to those penalties levied by regulatory agencies, which shall be wholly the responsibility of Concessionaire.

The Operator shall be responsible for complying with all applicable federal, state, and local laws and regulations pertaining to the Water System and shall comply with all approvals, licenses, permits, and certifications governing the performance of its Services hereunder issued for or with respect to the System.

These Operating Standards establish the general requirements for the operation, maintenance, and management of the Water System components. The provisions included are intended to address the major activities required, but all specific activities that are necessary for meeting the performance requirements set forth herein and/or applicable laws and regulations shall be the responsibility of the Concessionaire. The Concessionaire may adopt, in whole or in part, the Authority's O&M manuals, standard operating procedures (SOPs), computerized maintenance management system (CMMS), and/or other systems or procedures. Alternately, the Concessionaire may establish new procedures, which must be approved by the Authority before implementation. Regardless of origination of operating procedures, the Concessionaire shall be responsible for determining such specific activities and performing all necessary operation, maintenance, and management activities to meet the requirements defined herein, applicable laws and regulations, and maintain the condition and performance of the Water System.

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**Operating Standards – Part A – Water System Operating Standards**

The Concessionaire is responsible for maintaining procedures, records, and systems, as required, to facilitate reporting operational performance, service history data, and other records and data to the Authority as required by the Agreement and these Operating Standards. The Concessionaire shall provide the Authority a copy of all SOPs and proposed report forms during the Transition Period. The Concessionaire shall advise the Authority of any change to SOPs throughout the term of the Agreement. The Authority reserves the right, upon reasonable notice and during normal business hours, to conduct onsite inspections of facilities, and the Concessionaire will provide, upon the Authority's request, performance, operation, maintenance, and/or other records pertaining directly to the operation and maintenance of the Water System.

The roles and responsibilities of the Authority and the Concessionaire are further specified herein and in the Agreement.

## **2.0 Specialized Computer Software**

The Authority utilizes a specialized software package called AllMax Antero Maintenance Data Management program, as listed for the Concessionaire's reference in Exhibit B. The software listing is considered to be a complete list, provided for the Concessionaire's information, but actual computer software packages used by the Authority staff may vary to a limited extent. The Concessionaire, with the cooperation of the Authority, shall be responsible for determining the applicability and status of licensing fees, operating fees, contractual obligations, and/or other requirements or obligations associated with continued use of each software system. These systems may be used to facilitate and accomplish the responsibilities and objectives of these Operating Standards or the Concessionaire may utilize other systems. Regardless of the software systems utilized, the Concessionaire shall be responsible for data management and migration, conversions to other software systems, and any similar activity related to computer software systems.

The Authority utilizes ArcView GIS mapping software and will provide Concessionaire with complete access to perform its obligations hereunder relative thereto. The Concessionaire will be responsible for maintaining the Water System and Sewer System dataset in the GIS. The Concessionaire should use the data model framework provided by the Authority as a basis for maintaining feature and attribute information. The Authority and the Concessionaire will maintain separate systems and will share data, as required. The Concessionaire and the Authority agree that the shared data sets will be for use by the Concessionaire and the Authority solely within their respective organizations in the furtherance of their mission and approved work program and not to be disclosed to third parties except as required by law or approved by the Authority.

At the time of System return to the Authority at the end of the term of the Agreement or at termination of the Agreement, the Concessionaire will use its reasonable efforts to convey the software systems in use at that time to the Authority or the new System operator.

Equipment manufacturer information, operations inventory and maintenance information has been recorded in the CMMS systems for both the Water and Sewer Systems and is otherwise maintained in hardcopy system documentation available on site. All CMMS water information

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**Operating Standards – Part A – Water System Operating Standards**

is current; CMMS wastewater information must be updated by Concessionaire. All valve, equipment, and treatment components throughout the facilities have been identified and assigned unique identifiers, and all maintenance function tasks have also been coded. Existing Authority SOPs are detailed utilizing the assigned loop tag numbers. Such information will be available for the Concessionaire's use. The Concessionaire shall maintain equipment maintenance task assignments established by the Authority, but may change or modify the system in place at the time of Closing. The Concessionaire shall notify the Authority of any system or unique identifier changes, as it is the Authority's intent to utilize the coded system and assigned unique equipment identifiers to verify the Concessionaire's performance of maintenance activities in accordance with these Operating Standards.

**3.0      General Operation and Management Standards**

The Operating Standards described herein are intended to define the critical requirements for the operation and management of the water system, water storage facilities, and water distribution system, including maintaining water quality, system management programs, and operation and maintenance of facilities. Operation and control of the Water System is assisted by the Supervisory Control and Data Acquisition (SCADA) system in the Wastewater Treatment Plant (WWTP) control room, where it monitors data such as flows and well levels and booster pump status. The Operating Standards are intended to establish specific criteria for operation and maintenance of the Water System. The Concessionaire shall operate and maintain the Water System in accordance with applicable law, regulations, and Prudent Industry Standards. General guidelines for the operation and management of water systems and water distribution facilities shall follow the guidance of the following standards, as updated throughout the term of the Agreement, unless otherwise defined within these Standards or applicable law:

ANSI/AWWA Standard G100-11 (Water Plant Operation and Management).

ANSI/AWWA Standard G200-09 (Distribution Systems Operation and Management).

AWWA standards establish minimum recommended requirements for parts, materials, and practices in the production and conveyance of drinking water. The Concessionaire shall follow regulatory requirements for the construction, upgrade, replacement, and operation of the Water System. Such standards include, but are not limited to:

PaDEP Regulations and Requirements

USEPA Regulations and Requirements

The following standards, while not of regulatory nature, are considered guidelines for compliance with PaDEP and EPA regulations:

ANSI/AWWA C651 – Disinfecting Water Mains.

ANSI/AWWA C652 – Disinfection of Water Storage Facilities.

ANSI/AWWA C653 – Disinfection of Water Treatment Plants.

ANSI/AWWA C654 – Disinfection of Wells.

ANSI/AWWA G400 – Utility Management System.

APHA/AWWA/WEF – Standard Methods for the Examination of Water and Wastewater, latest edition.

#### **4.0 Water Treatment Plant and Water Quality Management**

The Concessionaire shall review the Authority's SOPs for equipment and plant production processes and, with Authority approval, establish a system to develop and update operation and maintenance manuals and SOPs. These procedures may be developed specifically for the WTP or may be taken from manufacturers' literature or other appropriate sources.

The Concessionaire shall satisfy applicable regulatory requirements, including but not limited to federal, state, and local ordinances, and codes that apply to System operation. Regulatory requirements include, but are not limited to all water quality requirements, construction requirements, residuals handling requirements, chemical storage regulations, and operator certification requirements. Compliance with regulations applies to regulations existing at the time of execution of the Agreement and regulations that become applicable during the term of the Agreement. Financial responsibility related to compliance with future regulations is addressed in the Agreement. The Concessionaire shall demonstrate that, at a minimum, the WTP performance meets or exceeds all applicable drinking water regulations and the conditions of applicable permits and shall submit a monthly report to the Authority summarizing all regulatory water quality reports and other applicable water quality data. A summary of applicable permits in effect at the time of the Agreement is provided, for reference, as Exhibit C.

#### **4.1 Performance Requirements**

In order to protect public health and enhance customer satisfaction, high quality water must be continuously produced regardless of source water changes or treatment plant component malfunctions. The System shall deliver the quantity of water sufficient to satisfy water demands and the quality of water to meet applicable regulatory requirements, as well as satisfy the demands of customers related to aesthetic water quality. Responsibility for and/or recovery of costs that may result from Force Majeure events and/or the deterioration of raw water quality is indicated in the Agreement.

##### ***4.1.1 Authority Water Quality Requirements***

The Authority has consistently operated the System in a manner that has consistently achieved compliance with water quality regulations. The Authority has made the optimization of process operations and finished water quality a priority. The Concessionaire shall maintain water quality, as measured by the parameters and requirements set forth in Exhibit D, subject to changes in applicable laws or regulations.

***4.1.1.1 Operational Liquidated Damages***

Absent evidence of actions or circumstances outside the Concessionaire's control or due to the fault of others, failure to achieve Authority water quality requirements will result in assessment by the Authority of OLDs of \$1,500 for the initial occurrence. Failure to correct operations and return to achievement of these requirements within three (3) months of the initial failure shall result in assessment of additional OLDs of \$500. Each quarter thereafter OLDs of \$500 per quarter for which the Concessionaire does not return to or maintain compliance with Authority water quality requirements will apply. If a year passes without the Concessionaire returning to compliance with the requirements, additional OLDs of \$3,000 will be assessed and any further quarterly OLDs will be doubled. Both quarterly and annual OLDs amounts will remain at these higher levels each and every time OLDs are assessed by the Authority following the initial occurrence. Such OLDs will be in addition to any penalties, fines, or other obligations levied by regulatory agencies for which the Concessionaire shall be solely responsible in accordance with the Agreement.

***4.1.2 Fluoridation***

At the time of Closing, the Authority adds fluoride to the treated water to promote dental health. The Concessionaire shall, unless contrary to applicable laws and regulations, maintain the practice of fluoridation, with a target finished water fluoride concentration that meets regulatory compliance standards for the water produced by the Water System wells. The practice of fluoridation can be discontinued only with prior approval by the Authority (which shall not be unreasonably withheld or delayed) and/or as required for compliance with applicable laws and regulations.

***4.1.3 Permits and Regulatory Approvals – At Time of Closing and Future***

The Concessionaire shall be responsible for compliance with permit requirements, penalties, corrective actions, and other activities and costs associated with permit compliance, non-compliance, applications, modifications, and/or other permit-related activities.

The Agreement provides a listing of existing permits and which the Concessionaire shall be added as Co-Permittee. Cooperation between the Authority and the Concessionaire may be required related to permit applications and/or renewals. The extent of such cooperation in such instances is defined in the Agreement.

***4.1.4 Annual Water Quality Report (Consumer Confidence Report (CCR))***

The Concessionaire shall be responsible for compliance with all regulatory requirements related to Annual Water Quality Reports, including, but not limited to, report preparation, distribution to customers, and advanced distribution of necessary information to bulk or contract water customers. The Concessionaire shall provide to the Authority, in advance of filing, a copy of the CCR. The Concessionaire shall provide to the Borough of Royalton raw data by April 1 of each year.



***4.1.5 Operational Liquidated Damages***

Absent evidence of actions or circumstances outside the Concessionaire's control, failure to achieve regulatory water quality requirements will result in assessment by the Authority of initial OLDs of \$2,500, in addition to any penalties assessed by regulatory or oversight agencies. Failure to correct operations and return to compliance with regulatory water quality requirements within the following month shall result in an additional assessment by the Authority of OLDs of \$5,000. Thereafter, OLDs of \$5,000 per month will be assessed by the Authority for each additional month for which the Concessionaire does not return to or maintain compliance with regulatory requirements. Concessionaire is solely responsible for any penalty or fee assessed by a regulatory agency.

***4.1.6 Future Water Demands***

Increased demand for finished water is anticipated in future years. Accordingly, Concessionaire shall be responsible for all necessary permits and regulatory requirements to accommodate increased demand.

**5.0 Real Property Management and Maintenance**

**5.1 Maintenance Management**

The Concessionaire may adopt the Authority's existing CMMS, with modifications as necessary, or may develop a new system. Regardless of the origin of the maintenance management system, the Concessionaire shall have a maintenance management system with practices adequate to sustain plant performance, as defined herein. The CMMS shall document maintenance frequency requirements, actual maintenance frequency (dates), and shall include a system to establish corrective actions if the maintenance frequency requirements are not achieved. The maintenance frequency requirements shall include inspection frequency for the process units associated with plant operation.

Exhibit E summarizes the services for which the Authority contracts for maintenance at the WTP, which will need to be continued by the Concessionaire. These contracts should be reviewed by the Concessionaire. The Concessionaire may self-perform or change vendors utilized for these services, but the scope of service and frequency of maintenance shall not be less than defined in the Authority's contracts, unless otherwise approved by the Authority.

***5.1.1 Operating Procedures***

The Concessionaire shall establish written operating and maintenance procedures that document the functioning of the Water System, including the plant, distribution system, and related facilities. Operating logs or Supervisory Control And Data Acquisition (SCADA) systems shall be used to record operational conditions, such as inlet pressure, discharge pressure, individual run times, flow rate, and other operational variables. All operating procedures must be approved by the Authority (which approval shall not be unreasonably withheld or delayed). The Concessionaire may adopt or incorporate the Authority's existing operation and maintenance procedures.



***5.1.2 Maintenance Program***

The Concessionaire shall establish written maintenance procedures for mechanical equipment describing frequency, procedures, and maintenance of records. Information shall include basic manufacturer operating/maintenance requirements. Records shall document inspections and any service performed.

Within six months following Closing, the Concessionaire shall maintain a CMMS for managing, scheduling, and recording preventive and corrective maintenance for all Water System components, including equipment, buildings, and structures. The CMMS will contain essential maintenance, warranty, and baseline condition information generated from an audit of the equipment and historical repair records. The CMMS system shall perform, at a minimum, the following functions:

- a. Inventory of all equipment, buildings, and structures;
- b. Schedule preventive maintenance activities;
- c. Track repair warranties;
- d. Provide easily accessible records of installation date and maintenance history (including costs);
- e. Generate work orders; and
- f. Record maintenance activities.

All maintenance work performed shall be recorded in the CMMS, including equipment maintenance and inspections, test results, repairs and replacements, and work performed by subcontractors. Documentation for work completed shall be maintained as one record and shall include a detailed description of the work performed, who performed the work, and all parts and materials used.

The Concessionaire shall report to the Authority a tabulation of major equipment taken out of service, date taken out of service, reason the equipment was taken out of service, and date the equipment was returned to service, as part of monthly reports. The Authority shall also have the right, during normal business hours and with notice to the Concessionaire, to periodically conduct Water System inspections and request operations staff to demonstrate the maintenance history of selected equipment, provided such inspections and demonstrations do not interfere with the Concessionaire's operation of the Water System. The Concessionaire shall cooperate with inspections and requests for information by the Authority.

**6.0 Distribution System Operations and Management**

The Operating Standards described herein are intended to define the critical requirements for the operation and management of the water storage facilities and water distribution system, including maintaining water quality, system management programs, and operation and maintenance of facilities. The Operating Standards are intended to establish specific criteria for operation and maintenance of the Water System. Unless more stringently specified herein, the Concessionaire shall operate and maintain the Water System in accordance with applicable law. The following standards, while not of regulatory nature, are considered guidelines:

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ANSI/AWWA Standard G200-09 (Distribution Systems Operation and Management).

AWWA standards establish minimum recommended requirements for parts, materials, and practices in the production and conveyance of drinking water. The Concessionaire shall follow regulatory requirements for the construction, upgrade, replacement, and operation of the Water System. The following standards, while not of a regulatory nature, are considered guidelines:

ANSI/AWWA C651 – Disinfecting Water Mains.

ANSI/AWWA C652 – Disinfection of Water Storage Facilities.

ANSI/AWWA D102 – Coating Steel Water Storage Tanks.

ANSI/AWWA D103 – Factory-Coated Bolted Carbon Steel Tanks for Water Storage.

ANSI/AWWA C654 – Disinfection of Wells.

ANSI/AWWA G400 – Utility Management System.

APHA/AWWA/WEF – Standard Methods for the Examination of Water and Wastewater, latest edition.

AWWA Manual M6 – Water Meters: Selection, Installation, Testing, and Maintenance.

AWWA Manual M14 – Recommended Practice for Backflow Prevention and Cross-Connection Control.

AWWA Manual M17 – Installation, Field Testing, and Maintenance of Fire Hydrants.

AWWA Manual M22 – Sizing Water Service Lines and Meters.

AWWA Manual M31 – Distribution System Requirements for Fire Protection.

AWWA Manual M42 – Steel Water Storage Tanks.

AWWA Manual M44 – Distribution System Valves: Selection, Installation, Field Testing, and Maintenance.

NSF/ANSI 60 – Drinking Water Treatment Chemicals.

NSF/ANSI 61 – Drinking Water System Components.

The Concessionaire shall be required to obtain road opening permits for work it performs in the public roads; however, neither the Borough nor the Authority shall impose any fees for obtaining such permits or require Concessionaire to provide bonding for such work.

## **6.1 Distribution System Performance Requirements**

### ***6.1.1 Water System Pressure***

The minimum residual pressure at curb stop (as measured at the nearest fire hydrant) under all operating conditions shall not be less than the minimum Pennsylvania regulatory requirement. The Concessionaire shall monitor pressure at critical locations. The Concessionaire shall notify the Authority immediately if minimum pressures are not maintained and/or of the occurrence of an event that may have resulted in the failure to maintain the required minimum residual pressure. The Concessionaire should review the Authority's pump operating criteria and tank level setpoints, included as Exhibit F, for reference.

### ***6.1.2 Flow Requirements***

The Water System shall be designed and constructed, for any new construction or replacement/renewals, with the capacity to deliver maximum day demands and fire flow for individual and public requirements, while maintaining the minimum pressure requirements. New construction of system facilities shall be submitted in advance for approval by the Authority (which approval shall not be unreasonably withheld or delayed) as set forth in the Agreement. The Concessionaire shall submit for review by the Authority, plans and engineering design information supporting the design of planned improvements.

## **6.2 Distribution System Monitoring and Control**

### ***6.2.1 Water Quality***

The Concessionaire shall determine and document all local, state, federal, and/or other regulations pertaining to distribution system water quality that apply to the Water System. The Concessionaire shall be responsible for maintaining distribution system water quality that meets regulatory requirements, and, in addition to required regulatory reports, shall submit a semi-annual report to the Authority summarizing distribution system water quality monitoring results.

### ***6.2.2 Sampling Plan***

A list of the Authority's current sampling stations is included as Exhibit G. The Concessionaire may modify the routine distribution system sampling plan as necessary, in accordance with applicable regulations, but any modifications to the sampling plan shall, at a minimum, maintain compliance with PaDEP sampling guidelines. The sampling plan shall be reviewed annually or more frequently if required for regulatory compliance, and modified, if necessary, based on changes in regulation/law, water use patterns, or other changes that may affect water quality. The Concessionaire shall analyze data trends and develop an action plan to respond to changes in water quality. The Concessionaire shall report to the Authority any and all sample results that do not comply with regulatory requirements.

Distribution system water quality sample reports to the Authority shall be made in accordance with PaDEP public notification requirements for samples not in compliance with regulatory requirements. The Concessionaire shall identify issues, corrective action plans, and report on corrective actions in subsequent reports to the Authority until the issues are corrected.

At the time of the Closing, the Authority collects distribution system water quality samples each month for regulatory compliance using customer taps or dedicated sample hydrants. The Concessionaire shall be responsible for maintenance, repair, and replacement, as necessary, of the sample hydrants. The Concessionaire should review the Authority's sampling plan and incorporate the Authority's plan into future operations.

### **6.3      Disinfectant Residual Maintenance**

#### ***6.3.1      Disinfectant Residual Requirement***

The Concessionaire shall maintain a detectable disinfectant residual at all points in the distribution system as required by the PaDEP regulations.

Any and all failures to maintain a detectable chlorine residual or the occurrence of a positive total or fecal coliform sample result in any distribution system water quality sample shall be reported to the Authority as soon as possible after the Concessionaire's receipt of the test results. When known, the Concessionaire shall advise the Authority of the suspected cause of failure and the corrective action(s) taken. The Concessionaire shall continue to update the Authority until the problem has been resolved. If the occurrence resulted in a documented violation, a written report detailing all pertinent information, an assessment of the cause of the problem, corrective actions taken, and the plan to prevent reoccurrence will be submitted by the Concessionaire to the Authority with the next monthly operating report due.

Should a boil water notice be necessary, the Concessionaire shall follow all mandatory regulatory procedures and perform all required public notification to advise the public of the situation and the corrective actions being undertaken.

#### ***6.3.2      Operational Liquidated Damages***

Absent evidence of actions or circumstances wholly outside Concessionaire's control or due to the fault of others, in addition to fines and other actions by regulatory agencies resulting from a boil water advisory, OLDs of \$2,500 will be assessed by the Authority for the first occurrence. The Authority will assess additional OLDs of \$5,000 for a second occurrence within a period of 24 consecutive months, and the Authority will assess additional OLDs of \$7,500 for a third occurrence within 48 consecutive months. In the event of a boil water advisory, the Concessionaire shall also provide to the Authority, within 12 hours, a verbal report indicating the cause or likely cause of the issue and corrective actions. The Concessionaire shall continue to update the Authority until the problem has been completely resolved. A summary of the cause of the problem, corrective actions, and preventive actions shall be included in the next monthly operating report.

### **6.4      Nitrification Control**

The Authority maintains a free chlorine residual in the water distribution system. If at any time the Concessionaire wishes to add ammonia to the water as part of the disinfection process, the Concessionaire shall first seek Authority approval, which approval shall not be unreasonably withheld or delayed, to establish a nitrification control program, including, but not limited to:

- a. Monitoring of the free ammonia concentration prior to and after chloramination and controlling the weight ratio of chlorine to ammonia through monitoring and adjustment to minimize the presence of free ammonia in the system.
- b. Adjustment of the ammonia feed rate to minimize the presence of free ammonia in the system.
- c. Routine monitoring for key nitrification indicator parameters such as nitrite, nitrate, and free ammonia.
- d. Corrective action plan, including flushing and periods of free chlorine application to correct nitrification occurrences.
- e. Preventative action plan to prevent/minimize the occurrence of nitrification.

A summary of monitoring data, identified issues, corrective actions, and preventive actions shall be included in routine semi-annual reports to the Authority.

### **6.5 Disinfection By-Product Monitoring and Control**

The Authority utilizes approved procedures, protocols, and sampling locations related to disinfection by-product (DBP) monitoring and control. The Concessionaire shall adopt the Authority's program or establish a PaDEP-approved program to monitor and control disinfection by-products. The program shall establish goals for DBPs at critical points in the distribution system. The program shall include specific actions should DBP levels exceed established goals/requirements. The program shall also be designed to achieve regulatory requirements.

The Concessionaire shall report to the Authority, within three (3) days of occurrence or the receipt of laboratory reports, any failure to comply with disinfection by-product monitoring and/or control requirements.

### **6.6 Corrosion Monitoring and Control**

The Concessionaire must establish and administer an approved protocol, primarily utilizing natural hardness and alkalinity, for corrosion control that employs a PaDEP-approved prevention and response plan to prevent, detect, and respond to both external and internal material corrosion and deposition problems in the distribution system, including, at a minimum:

- a. Monitoring and sampling for corrosion-related indicator parameters such as pH, alkalinity, conductivity, phosphates, silicates, calcium, metals, etc.
- b. The scale-forming potential shall be measured by Langlier Index and adjustments to finished water quality made to maintain the finished water corrosion index within a range proven to protect the system.
- c. Inspection, when exposed, of the condition of piping for perforations, tuberculation, and other conditions related to the integrity and hydraulic capacity of the Water System.
- d. Procedures to control lead and copper levels in accordance with the Lead and Copper Rule and/or other corrosion-related regulations.
- e. Procedures/guidelines for controlling other corrosion-related by-products such as iron, color, zinc, and taste and odor, in the distribution system.

The Concessionaire shall notify the Authority of any corrosion control issues within seven (7) days of the time at which the Concessionaire becomes aware of such issues.

### **6.7      Aesthetic Water Quality Parameters**

The Concessionaire shall develop an action plan to address taste, odor, color, and staining problems, and similar complaints related to the aesthetic quality of the delivered water, not related to a main break or hydrant flushing. Each complaint shall be investigated and logged, noting complainants name and contact information, time, nature, and location of delivered water in question. The Concessionaire can treat multiple, related complaints as an event, without the need to interview each complainant so long as the Concessionaire notifies the public of the event in accordance with then-current PaDEP public notification requirements. Onsite testing shall be performed at the discretion of the Concessionaire upon the occurrence of other similar or potentially related complaints. Following the complaint investigation, the complainant shall be contacted within 48 hours to determine if the complaint has been resolved. The Concessionaire will include the information above as well as the Concessionaire's conclusions in the report mentioned below.

The Concessionaire shall report a summary of taste and odor complaints to the Authority quarterly. On an annual basis, the Concessionaire's report shall include data for the previous two (2) years, by category, for comparison purposes.

### **6.8      Cross-Connection Control and Backflow Prevention**

Borough ordinances require new buildings and remodeled buildings to have appropriate backflow prevention devices, as well as for all home sales, but does not have a program for installation of backflow prevention devices in existing buildings, nor is there a program to document verification/testing of existing devices. The Concessionaire should refer to the Authority's most recent PaDEP Inspection Report in reference to identified needs related to cross-connection control and backflow prevention and with the full cooperation and assistance of the Authority will, within two (2) years after Closing, work with the Authority on implementing and maintaining a program provided the Authority adopts the necessary ordinances.

The Concessionaire shall establish cross-connection control and backflow prevention programs for the plant operations and for the distribution system. The program shall meet applicable regulatory requirements and following the guidelines or recommendations included in AWWA Manual M14 or as required by regulations.

- a. The plant will utilize isolation (plumbing) and containment strategies to protect the water supply and plant employees.
- b. Appropriate backflow prevention measures shall be required throughout the system. The program shall include verification and testing of backflow prevention devices at least annually or as required by local regulations.
- c. Summary reports of backflow prevention and testing activities shall be provided to the Authority as appropriate.

## **6.9      Water Loss and Leak Detection**

The Concessionaire shall perform leak detection, system repairs, and continue the Authority practice of an annual water audit, including water audits that may be required by regulatory/oversight agencies. Completion of the SRBC annual water audit and compliance with associated mandatory and recommended requirements shall be the Concessionaire's responsibility.

### ***6.9.1    Water Audit***

This audit requires the Concessionaire to monitor/record parameters on a monthly and daily basis and provides numerous performance indicators, including an Infrastructure Leakage Index (ILI), which should be used to assess water loss control. The Concessionaire shall demonstrate efforts annually toward reducing the ILI.

### ***6.9.2    Leak Detection***

The Authority has approximately three (3) miles of 12-inch transmission lines and 34 miles of distribution main. The Authority has historically performed leak detection surveys covering the entire system. The Concessionaire shall be responsible for distribution system leak detection and repair, including:

- a. The Concessionaire shall perform leak detection investigation on an average of 10 miles of pipe per year, minimum.
- b. The Concessionaire is advised that due to local soil types and geology, leakage can readily lead to soil subsidence and possibly sink holes. Consequently, identified leaks should be exposed as soon as possible after identification to determine the corrective action that will be necessary. The necessary remedial work should be scheduled accordingly.
- c. The Concessionaire shall report to the Authority, on a semi-annual basis, activities associated with leak detection and repair activities, including, but not limited to miles of mains surveyed, location of identified leaks, pipe diameters, characteristics of the leaks, dates of identification of the leaks, estimated volume of leakage, and dates of leak repair.

### ***6.9.3    Documentation and Reporting***

The Concessionaire shall provide reports to the Authority indicating:

- a.      Water Audit (annual)
- b.      Leak Detection and Repair (semi-annual)

### ***6.9.4    Operational Liquidated Damages***

Absent evidence of actions or circumstances outside the Concessionaire's control or due to the fault of others, failure to achieve leak detection and water audit requirements as defined herein shall result in assessment by the Authority of OLDs of \$1,500 for the initial occurrence. Additional OLDs of \$500 will be assessed by the Authority if the leak detection and water audit requirements are not on schedule within three (3) months following the end of the year, and for each additional three (3) month period that the Concessionaire fails to achieve schedule recovery.



If the work has not been completed for the current and preceding year, OLDs of \$6,000 will apply and quarterly OLDs assessments will be doubled. Both quarterly and annual OLDs will remain at these higher levels each and every time OLDs are assessed by the Authority following the initial occurrence.

## **6.10 Valve Exercising and Replacement**

### ***6.10.1 Valve Exercise Program***

Concessionaire shall continue the Authority practice of annual valve exercise programs. At the discretion of the Concessionaire, individual valves may be exercised more frequently. A summary of existing valves, by size, is included as Exhibit H. The summary of valves includes valves associated with hydrants. For valves less than 16 inches in diameter, the Concessionaire shall establish a valve exercising program that follows AWWA Manual M44 and the valve manufacturer's recommended procedures, and includes at least the following elements.

- a. The Concessionaire shall identify and report all valves requiring repair or replacement and shall be responsible for repair or replacement of such valves in a timely manner, but in all cases the time to repair or replace such valves shall not be greater than six (6) months from the initial date of identification of the repair or replacement need.
- b. Identification of critical valves and scheduling of more frequent exercising of critical valves.
- c. Water quality and isolation issues (avoiding service interruptions) shall be considered when developing the program.
- d. The valve exercise program should consider implementation of valve exercising in conjunction with the systematic flushing program and/or hydrant maintenance and testing program.
- e. The program shall be designed and executed such that system operation and emergency response, including the ability to isolate areas of the system or pipe segments, will not be compromised by one (1) or more broken valves.
- f. The Concessionaire shall establish a contingency plan prior to exercising critical valves. The plan shall be designed to ensure the continuity of system operation in the event that the valve is broken during exercise operations.
- g. The Concessionaire shall maintain records of valves exercised by the unique valve identifier to facilitate verification by the Authority of valve exercise work performed.

### ***6.10.2 Documentation***

The Concessionaire shall provide semi-annual reports to the Authority indicating:

- a. Number of valves exercised of each size.
- b. Number of valves inoperable or requiring maintenance, repair, or replacement by unique identifier, valve size, location, and date of inoperability.
- c. Summary of maintenance, repair, or replacement activities completed by unique identifier, valve size, location, and date of inoperability. Except for inoperable valves, which required repair or replacement during the current quarter, this will be a continuation of earlier semi-annual reports.



***6.10.3 Operational Liquidated Damages***

Absent evidence of actions or circumstances outside the Concessionaire's control or due to the fault of others, failure to achieve annual valve exercise requirements shall result in OLDs of \$1,500. Additional OLDs of \$750 will be assessed by the Authority if the valve exercise program is not on schedule within three (3) months following the end of the year and for each additional three (3) month period that the Concessionaire fails to achieve valve exercise schedule recovery. If the required number of valves have not been exercised for the current and preceding year, OLDs of \$3,000 will apply and quarterly OLDs will be doubled. Both quarterly and annual OLDs will remain at these higher levels each and every time OLDs are assessed by the Authority following the initial occurrence.

The Authority will assess the Concessionaire OLDs of \$250 for each valve identified as requiring repair or replacement that is not appropriately repaired or replaced within one (1) year of identification of the maintenance or replacement need.

**6.11 Hydrant Maintenance and Testing**

***6.11.1 Hydrant Exercise Program***

The Water System includes approximately 142 hydrants at the time of the Agreement. Currently, the Authority utilizes the XC2 program for flow and pressure testing. The Concessionaire shall establish a hydrant maintenance and flow testing program in accordance with regulatory requirements and the hydrant manufacturer's recommendations, that include at least the following:

- a. All Authority hydrants shall be inspected and tested annually.
- b. The program shall establish procedures for opening and closing hydrants to avoid damage to the Water System.
- c. Flow testing and recording requirements.
- d. Procedures to prevent damage to property.
- e. The program should consider implementation and coordination with the systematic flushing program and valve exercise program.
- f. All hydrants, including the hydrant lateral valve, identified as requiring repair or replacement shall be appropriately repaired or replaced within 6 months of identification of the need for repair or replacement.
- g. All hydrants requiring painting shall be painted at the time of inspection or painted as part of a dedicated painting program such that all hydrants identified as needing painting are painted within one (1) year of inspection and testing.
- h. Hydrants damaged by traffic shall be repaired or replaced within 30 days of the date of damage. The Authority will assist the Concessionaire in the recovery of the cost to repair or replace hydrants damaged by traffic from the party or parties responsible for the damage.
- i. The Concessionaire shall maintain records of hydrant maintenance, by the unique hydrant identifier, to facilitate verification by the Authority of hydrant inspection and testing work performed.

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At the time of Closing, the Authority will provide the Concessionaire with a list of damaged or inoperable hydrants and inoperable hydrant lateral valves. (Currently, none such hydrants exist.) The Concessionaire will not be responsible for the cost of repair or replacement of these hydrants. Repair or replacement of hydrants identified as damaged or inoperable at the time of Closing will be the financial responsibility of the Authority.

***6.11.2 Documentation***

The Concessionaire shall provide semi-annual reports to the Authority indicating:

- a. Number of hydrants inspected and tested.
- b. Number and unique identifier of hydrants inoperable or requiring maintenance, repair, or replacement.
- c. Summary of maintenance, repair, or replacement activities completed by unique identifier, valve size, location, and date of identified inoperability or need for repair or replacement. Except for hydrants which required repair or replacement during the current quarter, this will be a continuation of earlier quarterly reports.

***6.11.3 Operational Liquidated Damages***

Absent evidence of actions or circumstances outside the Concessionaire's control or due to the fault of others, failure to achieve annual hydrant maintenance requirements shall result in OLDs of \$1,500. Additional OLDs of \$500 will be assessed by the Authority if the hydrant exercise program is not on schedule within three (3) months following the end of the year and for each additional three (3) month period. If the required number of hydrants have not been inspected, exercised, and maintained for the current and preceding year, OLDs of \$3,000 will apply and quarterly OLDs will be doubled. Both quarterly and annual OLDs will remain at these higher levels each and every time OLDs are assessed by the Authority following the initial occurrence. Failure to repair or replace hydrants identified as inoperable within six (6) months of identification will result in OLDs of \$250 per hydrant.

**6.12 Streets Program Participation**

The Borough is considering implementation of an annual Streets Program that selects streets and/or alleys within the Borough for reconstruction or resurfacing. The Concessionaire shall attend the planning meetings and all progress meetings associated with the Streets Program and contribute to the discussion relative to the Concessionaire's obligations and objectives. A fundamental concept of the program is that after a street has been reconstructed or resurfaced as part of the program, the need to reopen the street for remedial infrastructure work will be minimized for an extended period of time. As such, it is imperative that non-emergency underground utility maintenance, repair, and/or replacement is performed concurrently with the Streets Program, when the condition of underground utilities may require maintenance, repair, or replacement in the near term.

The Concessionaire shall be responsible for cleaning and televising the sewer lines in the selected streets. The Concessionaire shall be responsible for repair or replacement of damaged or leaking sections and associated facilities, as necessary. The repaired or replaced lines shall be

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televised by the Concessionaire after the work has been completed to verify that the work has been successful.

All manhole elevations will be adjusted when necessary. The Concessionaire will supply, if necessary, and reset all manholes to proper line and grade for all reconstructed streets and supply all risers and rings for all overlaid Streets. The Concessionaire will also provide these same materials for all Borough contractor agreements. If in good condition, risers and manhole frame and cover assemblies may be reused.

The age, type of pipe, pipe break/leak history, and other relevant factors will be used to determine if the water lines and other Water System infrastructure in the selected street should be replaced as part of the Streets Program. If replacement is determined to be necessary in the judgment of the Concessionaire, the Concessionaire will be responsible for replacement of those sections of the pipe.

In performing these activities associated with the Streets Program, the Concessionaire will be responsible for all tasks normally associated with the work activities related to the Water System, provided, however, Concessionaire's restoration shall be limited to bringing the base up to the level of the street. The Borough will be responsible for the milling and final paving. All work shall be completed in conformance to Borough codes and ordinances and other applicable requirements.

All pertinent information related to the maintenance, repair, and/or replacement of Water System infrastructure associated with the Streets Program shall be entered into the GIS system. The Concessionaire's participation and performance with respect to the Streets Program will be an agenda item in the quarterly meetings.

### **6.13 Sinkhole Responsibilities**

The Concessionaire shall immediately notify the Borough of any sinkholes identified by or brought to the attention of the Concessionaire. The Concessionaire will be fully and directly responsible for repairs, remediation, and replacement of all Water System components damaged as a result of a sinkhole caused by a water main leak within the curb lines of the street, provided, however, Concessionaire's restoration shall be limited to bringing the base up to the level of the street. The Borough will be responsible for the milling and final paving. Repairs and replacements will be backfilled in accordance with Borough Standards. All manhole and water valve elevations will be adjusted when necessary. The Concessionaire will supply, if necessary, and reset all manholes and water valve boxes to proper line and grade for all reconstructed streets and supply all necessary risers and rings for all overlaid streets. If in good condition, risers and manhole frame and cover assemblies may be reused. All work will be coordinated with the Borough and other utility providers.

All work shall be performed in conformance with Borough codes and ordinances, and all pertinent information will be entered into the GIS system.

#### **6.14 System Flushing**

The Concessionaire shall develop and implement a systematic distribution system flushing program. Currently, the Authority implements system flushing twice a year (Spring and Autumn). Development of the flushing program shall include consideration of the condition of the Water System, hydraulic capacity, treatment, water quality, specific customer requirements, water quality complaint trends, and other criteria as appropriate. The Concessionaire may adopt in whole or in part, the Authority's flushing program or may develop a new program, so long as the flushing program includes:

- a. A preventive approach to complete distribution system flushing at a frequency of no less than one (1) time each year.
- b. Preventative flushing at required frequencies to address localized water quality problems or complaint trends.
- c. Achievement of adequate flushing velocity. Flushing velocity can be achieved using a conventional, uni-directional, or other flushing approach, as determined by the Concessionaire, as long as flushing is performed in a logical sequence required to force clean water into the flushing area.
- d. Written procedures addressing all activities associated with system flushing, including but not limited to, water quality and hydraulic monitoring; frequency, location, and duration of flushing; adherence to all regulatory requirements; and procedures to prevent property damage.
- e. The flushing program shall be provided to the Authority for informational purposes at least two (2) weeks prior to the planned initiation of routine/annual flushing.
- f. Authority review of a flushing plan is not required for reactive/corrective flushing to address customer complaints or water quality concerns.

The Concessionaire shall provide annual reports to the Authority summarizing flushing activities.

#### **6.15 Metering**

To the extent currently metered, the Concessionaire shall meter and record on a daily basis the volume of water entering the distribution system. From the Closing Date until the end of the Term the Concessionaire shall accumulate historical data related to the volume of water used in the WTP and pumped to the system. All customer accounts and other water uses (excluding fire protection) including Borough properties, shall be metered.

##### ***6.15.1 Meter Requirements***

All metering devices shall meet the requirements of AWWA or other applicable standards and shall be consistent and compatible with existing Authority metering equipment. The Concessionaire shall consult with the Authority related to meter replacement projects and keep the Authority advised as part of the annual reporting process.

***6.15.2 Meter Testing***

Authority meters were replaced in 2005. To ensure continued metering accuracy, the Concessionaire shall test or replace meters, using as a guideline, the frequencies recommended in AWWA Manual M6, the meter manufacturer's standards, or as required by applicable regulations. The Concessionaire shall report to the Authority, on an annual basis, a summary of meters tested, meter test results, and meter replacements as well as other meter-related actions.

The Concessionaire shall calibrate all source water and entry point meters and all interconnection meters annually, minimum, or more frequently if required by regulation or by questionable meter readings. The Authority shall be notified if any of these units are determined to be malfunctioning and shall be informed of the Concessionaire's plan and schedule for repair or replacement of the unit. The Concessionaire shall ensure that all interconnection/bulk water meters owned by the Authority are calibrated annually.,

***6.15.3 Meter Repair and Replacement***

The Concessionaire shall establish a program to replace or repair defective meters. The program shall verify conformance with the defined guidelines of AWWA Manual M6 and the meter manufacturer's recommendations.

***6.15.4 Documentation and Reporting***

The Concessionaire shall submit to the Authority, on an annual basis, a report summarizing calibration activities and results associated with raw water, plant, and bulk water customer meters, as well as customer meter calibration, testing, replacement, and associated activities.

**6.16 Treated Water Storage Facilities**

***6.16.1 Storage Capacity***

The Authority's storage facility and tank operating levels and pump operation setpoints are set forth in Exhibit F. The Concessionaire may modify minimum operating levels in storage facilities based on pressure in the distribution system, fire flow requirements, emergency storage requirements, and other site-specific conditions, as required. The Concessionaire shall have written operating procedures, which address water level fluctuations in the storage facilities and water turnover rates. The procedures should minimize water age in the finished water storage facilities to achieve water quality goals. The written policy shall establish the target turnover rate for each facility and minimum and maximum operating levels.

***6.16.2 Inspection and Testing***

The Concessionaire shall establish and execute a storage tank inspection program outlining inspection and maintenance frequencies, procedures, and maintenance of records. The inspection program shall include periodic and comprehensive (every 5 years) inspections.

***6.16.3 Maintenance***

The Concessionaire shall establish a storage tank maintenance program that includes periodic cleaning and refurbishing of facilities. Cleaning of finished water storage facilities shall be based on the results of internal inspections conducted every five (5) years or more frequently at the Concessionaire's option or as required by regulation. Full internal and external inspections shall be conducted in accordance with AWWA Manual M42. The Concessionaire shall conduct a formal external visual inspection of the storage facility at least annually to assess and repair environmental damage and verify the integrity of vents and screens. The inspection shall include an assessment of the physical security of the facility. Maintenance activities, such as coating or painting, shall be based on ANSI/AWWA Standards D102 and D103. The results of the storage tank inspection and maintenance program shall be included in the annual report to the Authority.

The Concessionaire should understand that, at the time of Closing, communication equipment (cell carrier) may be mounted on the treated water storage tanks. The Concessionaire shall comply with the requirements of any associated agreements and coordinate, as required, with the Owner of any equipment mounted on existing storage tanks, in accordance with the Authority's existing agreement(s) with the equipment owner(s). Any future installations shall be subject to mutual approval by Concessionaire and Authority, and the communications owner (or operator of such equipment) shall be required to ensure that it does not interfere with Water System operations or damage the structural integrity of the tank.

***6.16.4 Disinfection***

Storage facilities shall be disinfected in accordance with ANSI/AWWA C652 if drained for inspection, painting and/or other maintenance. Disposal of chlorinated water shall be performed in accordance with local, state, and federal regulations. If divers or remote operational vehicles are used, the divers and equipment shall be disinfected in accordance with ANSI/AWWA C652.

***6.16.5 Documentation***

The Concessionaire shall provide annual reports to the Authority documenting:

- a. Number and identification of tanks inspected and tested.
- b. Number and identification of tanks requiring maintenance, repair, or replacement.
- c. Schedule for maintenance, repair, or replacement.
- d. Summary of maintenance, repair, or replacement activities completed.
- e. Identification of maintenance, repair, or replacement required in the future based on the results of inspections.

**6.17 Pump Station Operations and Maintenance**

The Authority has existing operation and maintenance procedures for each well pumping facility and its booster station. The Concessionaire may, with Authority approval (which approval shall not be unreasonably withheld or delayed), modify the Authority's existing procedures, and shall provide operating and maintenance procedures for each pumping facility to the Authority. Operating logs shall be used to record operational conditions, such as inlet



pressure, discharge pressure, individual pump run times, flow rate, and other operational variables. Operating procedures will include pump start and stop routines and procedures for flow rate changes that minimize the occurrence of pressure surges. The Concessionaire shall monitor and record pump station operating data and maintenance activities.

## **6.18 Pipeline Rehabilitation and Replacement**

### ***6.18.1 Transmission Line***

A report including the identification and general classification of identified leaks throughout the Authority's Transmission system was provided by the Authority. The Authority has established programs to address leaks throughout its system. Identification and remedial action on transmission line is the continuing responsibility of the Concessionaire.

### ***6.18.2 Evaluation and Replacement Requirements***

The Concessionaire shall also establish a program for evaluating and replacing existing portions of the distribution system, as required based on the physical condition of the pipes as determined through inspections, leak/break records, flow testing results, and other criteria. The Concessionaire shall update the assessment annually, provide an assessment report to the Authority, and meet with the Committee to discuss pipeline rehabilitation and replacement needs. The Concessionaire shall replace on average at least 2,500 linear feet of existing pipe per year, with an initial focus on replacement of any aged pipe that has been in service for greater than 100 years, or, pipes identified as problematic or potentially problematic based on an evaluation of leak history and other data, excluding pipe that has been replaced within the last ten (10) years. In conjunction with the aforementioned pipeline replacement program, all lead and gray iron service piping from the main to the curb shall be replaced regardless of condition. Once all system pipe has been replaced, the Concessionaire is under no further obligation, except for repair, under this provision.

The Authority GIS includes information that may be used in identifying and prioritizing mains for replacement. The Concessionaire shall be responsible for the cost and implementation of all pipeline rehabilitation and replacement projects. The annual main replacement requirement may be reduced, with Authority approval (which approval shall not be unreasonably withheld or delayed), when leak history, leak survey results, annual water audit reports, and other data no longer supports the need for routine replacement at the defined level. Any pipe replaced due to sinkhole repair or as part of the Streets Program shall be included as part of the Concessionaire's annual main replacement requirement.

### ***6.18.3 Operational Liquidated Damages***

Absent evidence of actions or circumstances outside the Concessionaire's control or due to the fault of others, failure to achieve annual pipeline replacement requirements, as measured on a rolling five-year average, shall result in an assessment by the Authority of OLDs of \$2,500. Additional OLDs of \$500 will be assessed by the Authority if the main replacement program is not on schedule within three (3) months following the end of the year and for each additional three (3) month period. If the pipeline replacement requirement has not been achieved for the second consecutive year, OLDs of \$4,000 will be assessed by the Authority and OLDs assessed

at three (3) month intervals will be doubled. All OLDs will remain at these higher levels each and every time OLDs are assessed by the Authority following the initial occurrence.

#### **6.19    Disinfection of New or Repaired Pipes**

All new or repaired sections of pipe shall be protected from contamination and disinfected in accordance with the requirements of ANSI/AWWA C651 and applicable regulations and permit requirements. Chlorinated water shall be disposed of in accordance with local, state, and federal regulations.

#### **6.20    PA One Call**

The Concessionaire shall be responsible for response actions relative to marking of water and sewer utilities in accordance with PA One Call requests. Authority shall provide any applicable Water System records to Concessionaire to assist it in performing this obligation.

#### **6.21    Service Interruptions**

The Concessionaire shall implement a system to document and respond to all planned and unplanned service interruptions, and shall file such plan with the Authority. Planned service interruptions are subject to Authority approval (which approval shall not be unreasonably withheld or delayed). The Concessionaire shall adhere to regulatory requirements related to Public Notification in the event of service disruption, water quality issues, and other conditions that require public notification pursuant to PaDEP regulations. The Concessionaire is responsible for notification. The Concessionaire shall also provide notification as soon as possible to the Authority Traffic officers in the event of a repair or any other event that will result in traffic disruption.

##### ***6.21.1 Response to Unplanned Disruptions of Service***

- a. The Concessionaire shall establish a standardized system for recording and reporting pipeline leak or break information to the Authority. At a minimum, the data collected on a leak or break report shall include pipe location, pipe material, pipe size, pipe age, pipe depth, estimated quantity of water lost, date of break, apparent type of leak or break. The information shall be provided to the Authority in an annual report.
- b. The Concessionaire shall maintain an automated notification system to notify impacted customers.
- c. Dependent upon the extent of the service interruption, the Concessionaire may utilize door-to-door notification or an automated notification system to notify impacted customers.

##### ***6.21.2 Planned Service Interruptions***

The Concessionaire shall provide the Authority and all impacted customers notification at least 7 days in advance of project initiation and additional notification 48 hours in advance of the final connection shutdown for all planned service interruptions.



***6.21.3 Reporting and Documentation***

The Concessionaire shall submit semi-annual reports to the Authority related to both planned and unplanned service interruptions.

**6.22 New User Connections**

The Concessionaire shall install new connections to the Water System to serve new customers, or for existing customers who require a new connection. The connection will be constructed in accordance with the Authority's Standard Materials and Construction Specifications and Pennsylvania's Uniform Construction Code. The Concessionaire will document the location and depth of the connection and maintain that information as permanent record. The Concessionaire will provide a record of the installation to the Authority and provide the information as part of the GIS data sharing. Concessionaire shall be entitled to receive any connection fees paid by System customers for new connections.

**7.0 Laboratory Standards**

The Concessionaire shall maintain or contract for services from an accredited water treatment plant laboratory, and the laboratory must be available to respond to distribution system water quality issues, in addition to performing routine water quality analyses. Currently, the Authority utilizes Analytical Lab Services (for both water and wastewater) for testing not done in-house.

The Concessionaire will be responsible for contracting with an outside laboratory and also responsible for all costs associated with sampling and analysis.

**8.0 Customer Service**

**8.1 Customer Service Operations**

The Concessionaire shall maintain a Customer Service operations with representatives available Monday through Friday, except on Holidays, during normal business hours, to provide assistance to customers of the system for billing or service issues. These operations may serve both water and sewer system customers. The Concessionaire will dedicate office space for Customer Service use. The Service operations shall be located in an area easily accessible to customers and will be available by telephone 24 hours per day, 7 days per week, including holidays, where customers can report emergencies or complaints.

**8.2 Customer Call Protocol**

The Concessionaire will record the following information regarding customer calls received:

- a. Customer's name and location;
- b. Complaint/issue or subject of the call;
- c. Time of call received;
- d. Time of response;
- e. Actions taken; and

- f. Customer call-back, if requested or appropriate.

The Concessionaire will maintain call records for a period of at least two (2) years. It is not necessary to provide copies of each individual report to the Authority. However, the Concessionaire shall provide a semi-annual report to the Authority that summarizes the information recorded and tabulates the customer calls by type (*i.e.*, billing issue, blockage, taste, odor, or noise complaint, personnel complaints, etc.). A summary of the call records will also be included, tabulated by category, in the Annual Report submitted to the Authority, along with a summary of the records for the previous two (2) years.

The Concessionaire shall have an action plan to address taste, odor, color, and staining problems, and similar complaints related to the aesthetic quality of the delivered water. Each complaint shall be logged, noting complainant's name and contact information, time, nature, and location of delivered water in question. Each complaint shall be investigated and shall include a customer interview and onsite testing upon the request of the complainant or the occurrence of other similar or potentially related complaints. The complainant shall be contacted within 48 hours to determine if the complaint has been resolved. Further investigation will be required if the problem has not been resolved to the satisfaction of the customer. The Concessionaire will submit a semiannual report to the Authority noting the information above and the Concessionaire's conclusions relative to the complaint.

The Concessionaire shall report a summary of taste and odor complaints to the Authority quarterly. Each semiannual report shall include data for the previous two (2) years, by category, for comparison purposes.

All complaints related to odors believed to be emanating from the WWTP will be directed to the Operator in Charge at the WWTP for investigation and follow-up. The Authority will be advised by the next working day after the Operator's investigation and follow-up and an individual report will be filed with the Authority noting the time and date of the complaint, the name and address of the complaining party, contact information for the complaining party, an account of the investigation noting any condition at the WWTP that may have been responsible for or contributed to the complaint.

## **9.0 Operational Management Practices**

### **9.1 Capital Improvement Planning**

Capital Improvement Planning shall include a comprehensive facility inspection, system performance evaluation, and development/update of a long-term improvement plan including project cost estimates. This requirement harmonizes with the Major Capital Improvements provisions set forth in the Agreement at §7.1(f).

The Concessionaire shall implement a long-term master planning/capital improvement planning process. The Comprehensive Planning Study shall be performed at 5-year intervals. The Concessionaire shall either perform the study using its own engineer or contract with an outside professional engineer, registered in Pennsylvania, provided either engineer must have a

minimum of 5 years experience conducting similar water system studies. The Concessionaire shall provide the final study report to the Authority, include the long-term planned Capital Improvements and associated activities in routine reports to the Authority, and routinely report on progress. The Concessionaire shall be responsible for executing Capital Improvements in accordance with the process set forth in the Agreement. Progress related to ongoing capital projects will be an agenda item during quarterly meetings.

## **9.2 Energy Management and Sustainability**

The Concessionaire shall establish a program to review and optimize energy usage and sustainability, including, at a minimum:

- a. Review of energy usage, identification of energy use trends, and cost or usage tracking versus time.
- b. Consideration of energy efficiency improvements and equipment and/or operational modifications.
- c. Consideration of energy costs in evaluation of new system facilities.
- d. All capital improvement projects related to system infrastructure and associated facilities shall incorporate concepts of sustainable design.
- e. The Concessionaire shall include sustainability, energy use, and the status of energy efficiency initiatives as part of annual reports to the Authority.

## **9.3 Housekeeping Procedures and Cleanliness**

The Water System, distribution system, and related facilities shall be maintained in a neat and orderly condition. Operation and maintenance functions should be conducted in such a manner that plant site safety and water quality are not compromised.

## **9.4 Record Keeping, Data Review, and Reporting Requirements**

In addition to copies of all report submissions to regulatory and oversight agencies, the Concessionaire shall submit monthly, quarterly, and annual reports as defined in this section and throughout these Operating Standards. Several of the required reports will be similar to those being generated by Authority personnel at the time of Closing. The monthly operating reports from each treatment facility are of particular importance to the Authority. The reports provided by the Concessionaire to the Authority shall provide similar information. An example monthly report is included as Exhibit I, for reference. The Concessionaire may modify existing report formats, as necessary, for compliance with Authority requirements and the Concessionaire's use. For those reports that have not historically been prepared by Authority personnel, the Concessionaire shall be responsible for developing a report format. In all cases, within 120 days of Closing, the Concessionaire shall submit proposed report forms for approval by the Authority. The Authority will verify that the required and necessary information will be provided by the proposed report form in a manner that facilitates understanding of the material presented. Each report shall include a cover/summary sheet that includes the name of the report and the time period covered, and briefly summarizes and highlights critical information contained in the report. The Concessionaire may combine multiple reports, for convenience, and all reports may be submitted in electronic format, at the Concessionaire's option.

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The Concessionaire is responsible for maintaining procedures, records, and systems, as required, to facilitate reporting operational performance, service history data, and other records and data to the Authority as required by the Agreement. In addition to the required routine reports delivered to the Authority, the Authority reserves the right to conduct onsite inspections of facilities, and the Concessionaire is required to provide, upon the Authority's request, performance, operation, maintenance, and/or other records pertaining directly to the operation and maintenance of the System, to demonstrate compliance with the requirements of these Operating Standards.

All reports required herein shall be submitted to the Authority in a timely manner, as follows, and each shall have a separate cover describing the name of the report, time frame that the report covers, and any and all items that are deemed to be of significance to the Authority, as the owner of the system, or of possible consequence to the maintenance and operation of the System, particularly with respect to meeting the requirements of these Operating Standards.

The reporting deadlines are as follows:

- Monthly and Quarterly Reports      30 days after the end of the month or quarter
- Annual Reports      April 1, each year for the preceding year

If a report will not be submitted in accordance with the criteria above, the Concessionaire shall provide two (2) days notice to the Authority, minimum. Late submittals or failure to submit a report will result in the Authority assessing OLDs upon the Concessionaire as follows:

- 2<sup>nd</sup> Occurrence within 12 consecutive months      \$200
- 3<sup>rd</sup> Occurrence within 12 consecutive months      \$300
- 4<sup>th</sup> Occurrence within 12 consecutive months      \$500
- 5<sup>th</sup> Occurrence within 12 consecutive months      \$1,000
- Further occurrences will result in OLDs based on pertinent factors. OLDs are based on late filing of reports within one (1) week. Failure to file the report within one (1) week following the due date will result in doubling of OLDs. OLDs are double for any regulatory report filed late or incomplete.

The Authority will evaluate the monthly and quarterly reports received during the initial six (6) months following Closing for content and format, and advise the Concessionaire of its findings. The Concessionaire will have the opportunity at that time to offer suggestions to the Authority regarding these reports. The Authority will similarly evaluate the first Annual Report for content and format, and advise the Concessionaire of its findings. The Concessionaire will have the opportunity at that time to offer suggestions to the Authority regarding the Annual Report. Following these initial evaluations, the Authority and the Concessionaire may, from time to time, review the scope of the reporting obligations and the report format and may agree to modify the format or reporting requirements as appropriate.

The Concessionaire should refer to ANSI/AWWA G400 for details on record keeping and data review.

The Concessionaire shall maintain the Authority's protocol or establish an Authority-approved protocol that is no less stringent, for complying with the reporting requirements of applicable regulations. The protocol shall designate who is responsible for the reports and the timing of submittal. The protocol shall include adequate lead time to acquire necessary approvals and meet the deadline for submitting reports. The Concessionaire shall provide a copy of all reports and other documentation submitted to regulatory agencies to the Authority. All reports shall include a brief summary of the report.

## **9.5      Materials, Supplies, and Quality Assurance**

### ***9.5.1      Chemicals***

- a. Water Treatment Chemicals shall be NSF/ANSI 60 Certified or be approved by the applicable regulatory agency.
- b. Water Treatment Chemicals shall comply with, as a minimum standard, AWWA Standards for individual chemicals.
- c. The Concessionaire should review the Authority's Chemical Specifications and incorporate the Authority's existing specifications into the Concessionaire's Standards.
- d. The Concessionaire shall establish protocols to establish/verify the quality of delivered chemicals. The requirement for verification of chemical quality shall be included in the applicable Chemical Specification.
- e. Testing requirements should, at a minimum, comply with requirements specified in applicable AWWA Standards for each chemical.
- f. The Concessionaire shall establish and maintain records verifying the quality of delivered chemicals.

### ***9.5.2      Materials and Equipment***

- a. Materials and equipment used in the Water System shall comply with applicable AWWA Standards, Authority requirements, and regulatory requirements.
- b. Drinking Water System Components shall be NSF/ANSI 61 Certified.
- c. Construction activities shall comply with applicable law.
- d. Activities shall be performed in compliance with the Borough of Middletown Codes and Ordinances.
- e. Water System construction shall be performed in accordance with the Authority's Water System Standard Specifications and Details.
- f. AWWA approved pipe shall be used for water main repairs and all new water main construction.

## **9.6      Disinfection of Water System Facilities**

Water System facilities, including plant and distribution system facilities, shall be disinfected in accordance with regulatory requirements and ANSI/AWWA C651, ANSI/AWWA C652, ANSI/AWWA C653, or ANSI/AWWA C654.

### **9.7      Materials in Contact with Water**

Materials that are in contact with the water and provide potable water for domestic use within the Water System (except waste lines and other situations where the water is not part of the distribution system and is not mingled with production water at any point) shall conform to AWWA standards and NSF/ANSI 61 unless the material is not covered by these standards. Other appropriate regulatory standards may apply in addition to these standards.

### **10.0      Source Water Management**

The Concessionaire shall be responsible for grounds maintenance, including but not limited to grass mowing and snow removal at well sites, booster pumping stations, storage tanks, as well as the treatment facility. The Concessionaire shall be responsible for all source water protection protocols and existing programs for all state and federal regulatory agencies.

### **10.1      State Water Plan**

The Concessionaire shall prepare for the Authority's review and shall be responsible for timely submission, as required, of reports and other documentation related to registration and reporting of water withdrawals associated with the State Water Plan (Act 220) and related requirements.

### **11.0      Site Safety and Security**

The Authority has an existing security program, including a vulnerability assessment as well as the standard physical plant security. The existing security program, or an equivalent system shall be maintained, in service, by the Concessionaire. The Concessionaire shall be responsible for assessing and maintaining the adequacy of the security program in accordance with regulatory requirements and ANSI/AWWA Standard G430-09 – Security Practices for Operation and Management, whichever is more stringent. The Concessionaire shall notify the Authority as soon as practicable and necessary given the nature of the breach, but no later than 12 hours after becoming aware of any security breach. The Concessionaire shall also be responsible for notifying PaDEP, as required, relative to any security breach. The Concessionaire shall submit a report to the Authority related to the results of investigation of any security breach.

The Concessionaire shall take all precautions necessary to safeguard persons entering the facilities and to protect water quality and Water System properties. The Concessionaire shall develop and implement a Security Plan that will include, but not be limited to, the following goals:

- a. Prevent unauthorized entry;
- b. Prevent interference with treatment processes;
- c. Prevent injury to employees, visitors, or neighbors; and
- d. Prevent loss or damage to Authority property.

Security policies incorporated into the Security Plan shall include, but not be limited to, the following features.

- a. External facility doors will be locked at all times.
- b. Entrance gates will be securely locked during non-business hours.
- c. Fencing and gates will be periodically inspected and maintenance performed as needed.
- d. Building entry and fire alarm systems will be routinely monitored, inspected, tested, and maintenance performed as needed.
- e. Appropriate identification and documentation of authorization of all persons accessing the facilities will be required. Trespassing will not be tolerated and shall be referred to local law enforcement agencies. The Authority will cooperate in the prosecution of any offenders.
- f. A record of all persons accessing the facilities.
- g. Employees will report all suspicious observations to site management.
- h. Facility security checks will be conducted as part of normal operational rounds and will be documented in logbooks.
- i. Local enforcement agencies will be immediately notified in the event of an emergency situation.
- j. All security incidents will undergo review and corrective actions to prevent recurrence.
- k. Staff and contractors working on site will receive security training.

## **12.0 Emergency Response Plan**

The Authority has an existing Emergency Response Plan (ERP). The Concessionaire shall review and update the ERP as required within six months following Closing. The ERP shall be maintained in accordance with PaDEP's *Guidelines for the Development and Implementation of Environmental Emergency Response Plans* (document number 400-2200-001). The plan will establish emergency response protocols to address, at a minimum, the following hazards and emergencies:

- a. Chemical Spills;
- b. Fire and explosions;
- c. Pipe, valve, or pump failures;
- d. Equipment or process failures;
- e. Power failures;
- f. Acts of God (*i.e.*, floods, hurricanes, wind storms, etc.);
- g. Pipeline breaks; and
- h. Personnel emergencies.

In accordance with the PaDEP Guidelines, the ERP will be reviewed and updated annually and shall contain, at a minimum, the following information:

- a. Description of the facility;
- b. Material and Waste inventory;
- c. Pollution incident history;
- d. Description of existing ERPs;
- e. Implementation Schedule for plan elements not in place at the time of Closing;



- f. Organizational structure of facility for implementation;
- g. List of Emergency Coordinators;
- h. Duties and responsibilities of the Coordinator;
- i. Chain of command;
- j. Spill Leak Prevention and Response;
- k. Countermeasures to be taken by Facility and Contractors;
- l. Evacuation plan for plant personnel;
- m. Emergency equipment available for response;
- n. Emergency Spill Control Network;
  - i. Coordination with local ERP Agencies and Hospitals;
  - ii. Notification Lists; and
  - iii. Downstream notification requirements for storage tanks.

The Concessionaire shall also adhere to the guidelines established by the ANSI/AWWA Standard G440-11 – Emergency Preparedness Practices.

### **12.1 Drought Emergency Response**

Within one year following the Closing, the Concessionaire shall be responsible for developing a Drought Emergency Response Plan and implementing the plan whenever a drought advisory or drought emergency is declared for Dauphin County. The Concessionaire shall be responsible for coordinating and cooperating with the Dauphin County and Pennsylvania Drought Response programs.

### **12.2 Spill Prevention Plan and Notifications**

The Concessionaire shall be responsible for maintenance, update, and other requirements associated with Spill Prevention Plans and related requirements, including annual updates and notifications.

### **13.0 Inspection of New Construction**

The Concessionaire shall be responsible for inspection of construction work associated with the Water System, including new construction and repairs. The Concessionaire will insure that the construction methods and materials are consistent with Borough, industry and state construction regulations. The Concessionaire will prepare and maintain record drawings for all Water System construction and shall record on one-line diagrams adequate information describing the location of new or repaired below-grade distribution system facilities. The Concessionaire shall coordinate with the Authority relative to update of the Authority's GIS data to ensure that new construction and repaired or replaced system components are properly recorded in the GIS.

### **14.0 Operator Training**

The Concessionaire is responsible for process safety and health training for existing and newly hired employees. Process training will include familiarization with the SOPs and other operating protocols. Safety training will be conducted periodically for new and existing employees to familiarize the staff with potential dangers related to equipment and processes,



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particularly fire and explosion dangers, dangers associated with toxic or corrosive gases or liquids, and dangers related to electrical equipment. Training may be performed by in-house experts. However, industry experts must be used when in-house expertise is not available.

**15.0 Internal Annual Performance Review**

Beginning in 2015 and annually thereafter, the Concessionaire will perform an internal review of the operation of the Water System and provide a detailed report to the Authority of its findings. The review shall include an examination of all SOPs related to process operations and maintenance and will identify deficiencies and corrective measures taken to mitigate the deficiencies. The review will note and identify any concerns or issues which the Concessionaire believes will prevent or impede compliance with the Operating Standards or the Agreement, and will include recommendations and/or a plan for addressing each concern. The review will also examine customer service issues, and will discuss the success of measures taken to improve customer relations and service.

**16.0 Additional Requirements and Operational Liquidated Damages**

The Authority will issue a Notice of Violation to the Concessionaire for any failure to comply with the requirements of these Operating Standards. The Notice of Violation will include any associated OLD amount. The Concessionaire shall have the right to appeal the Notice of Violation and OLD and may provide information to the Authority to support the appeal. The Concessionaire must file a request for an appeal within seven (7) days of receipt of the Notice of Violation from the Authority. Unless appealed, payment of all OLDs will be due within 30 days of receipt of the Notice of Violation.

With respect to performance standards having annual requirements, the Concessionaire will consider the time of year and anticipated weather conditions when planning repairs and replacements. It is appreciated that unusual weather or possibly other factors beyond the control of the Concessionaire can adversely impact planned work activities.

If the Concessionaire believes that conditions beyond its control will result in a failure to comply with the requirements and possibly result in OLDs, the Concessionaire should advise the Authority in writing (electronic communication is acceptable) of the conditions which may cause the delay and the anticipated timing of the completion of the work.

The Authority will give reasonable consideration for time extension based on the unanticipated nature and uncontrollability of the cause(s) of the delay and the Concessionaire's timeframe for completion of the work.

Allowances and relief from compliance with the Operating Standards will be made for events resulting from Force Majeure, as defined in the Agreement. In such event, the Concessionaire shall, as soon as practical, advise the Authority of the specific issues, impacts on compliance with any and all Operating Standards, actions being taken, and the schedule for returning to compliance. Force Majeure relief from the requirements of the Operating Standards, relating to regulatory and permit requirements, will not apply for labor-related events, unless the applicable regulatory authority has specifically granted approval for such relief.

There will be quarterly meetings between the Authority and the Concessionaire to allow for open discussions between the Concessionaire and the Authority related to issues of concern.

### **17.0 Alternative Approaches**

For all performance standards which have annual performance requirements, the Authority may allow, upon written approval, alternative approaches to satisfying the goals of those requirements. The Concessionaire will provide the Authority with all details and the implementation schedule for the proposed alternative approach for the Authority's review and approval. The overall effectiveness of the proposed alternative approach will not be less than that stated as a performance requirement. The Authority will not unreasonably withhold approval of the proposed alternative approach. Ancillary requirements and associated OLDs may be redefined based upon the alternative approaches.

As an example, in the Water Supply section, the Concessionaire may propose to perform a leak survey of the entire distribution system initially to enjoy economies of scale and to identify and repair larger leaks sooner to reduce production costs. The Authority and the Concessionaire will mutually develop the associated repair and OLDs aspects of the alternative approach.

### **18.0 Annual Exceedance Credit**

For performance standards with an annual performance requirement, such as number of valves exercised, if the Concessionaire's performance during any year exceeds the annual requirement, that exceedance of the annual requirement may be credited towards satisfying the annual requirement during the following year.

### **19.0 Transition Period**

The period beginning with the date of Closing and ending six (6) months later, shall herein be referred to as the Transition Period. The Concessionaire will submit for the Authority's review and approval (which approval shall not be unreasonably withheld or delayed) all SOPs and reporting forms as required by the Operating Standards. The proposed drafts should be submitted within 180 days of Closing to allow time for review by the Authority and subsequent modifications as might be necessary. The Concessionaire should give consideration to satisfying several reporting obligations by combining necessary information into a singular report. All relevant issues, including use of software for report generation and submission, should be addressed and finalized within this period.

During the Transition Period, the performance requirements for all Operating Standards with an annual requirement will not be in force.

During the first full year following the end of the Transition Period, the performance requirements for all Operating Standards with an annual requirement will be reduced to fifty percent (50%) of the performance requirements. The OLDs stated in the Operating Standards will remain in place.

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Beginning with the second full year following the end of the Transition Period, and thereafter, all conditions, requirements, and OLDs in the Operating Standards will be in full effect.

**PART B - WASTEWATER SYSTEM OPERATING STANDARDS**

**1.0      General Requirements**

**1.1      General Operation and Maintenance Requirements**

The Concessionaire will be fully responsible for the operation, maintenance, and management of the Wastewater Treatment Plant (WWTP), wastewater collection and conveyance systems, and all other components of the Sewer System. The Concessionaire shall operate, maintain, and manage the Wastewater System in accordance with the Agreement and applicable laws, regulations, and ordinances. The Concessionaire shall provide uninterrupted operation of the Sewer System and shall operate the Sewer System on a continuous basis, 24 hours per day, seven (7) days per week throughout the term of the Agreement. The Concessionaire shall staff the WWTP 8 hours per day, 7 days per week during the entire term of the Agreement. The Concessionaire shall provide billing, customer service, and other ancillary services associated with the operation of the Sewer System. In addition to activities directly associated with the collection and treatment of wastewater, the Concessionaire's responsibilities also include all maintenance of grounds, landscaping, buildings, and equipment comprising the Sewer System. Specific responsibilities are further defined herein.

The Concessionaire shall, at all times, keep the Sewer System in good repair and working order and shall operate, maintain, and manage the Sewer System in a professional, efficient, and economical manner. Operational decision making shall always be based on the following overall objectives:

- Protection of health and welfare of the public.
- Protection of the health and safety of the Sewer System operating staff.
- Preservation of the long-term capability to provide wastewater services in accordance with legal, regulatory and customer service requirements.
- Protection of the environment.
- Protection and preservation of the Sewer System equipment and facilities.
- Maximization of Sewer System operational efficiency.
- Compliance with all PaDEP, USEPA, SRBC, the Borough, and other applicable regulations and those of other agencies with jurisdiction.
- Compliance with the Authority's and Borough's obligations in accordance with Agreements between the Authority and others, including adjacent municipalities and other sewer system providers, in accordance with the Agreement.

The Concessionaire shall be required to perform the following subject to the specific terms of the Agreement and the Operating Standards:

- Operate, maintain, and manage the Sewer System.
- Treat wastewater to maintain regulatory effluent quality.
- Meet all permit requirements as well as any NoVs, Consent Decree or Administrative Order requirements that occur during the term of the Agreement.
- Perform all corrective, predictive, preventive, and ongoing maintenance of the Sewer System.

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- Perform all analytical sampling, testing, analyzing, and reporting.
- Maintain all necessary records, including laboratory sampling and analysis results, in accordance with regulatory requirements.
- Provide emergency services associated with the Sewer System and Sewer System operation, as required.
- Maintain grounds and buildings.
- Keep facilities secure and correct/improve security measures as identified by the Concessionaire (or its agents) and/or regulatory agencies as part of required or other evaluations.
- Keep facilities clean.
- Maintain records documenting compliance with applicable laws, regulations, and ordinances, as well as requirements of the Authority.
- Provide routine reports to the Authority.
- Make available, upon written request by the Authority, information necessary to document compliance with applicable laws, regulations, and ordinances as well as compliance with these Operating Standards.
- Subject to the terms and conditions of the Agreement, identify and execute any necessary Capital Improvements to the Sewer System, as otherwise set forth in the Agreement at §7.1(f).

The Authority's existing permits/approvals for the Sewer System are listed in Exhibit C, for reference. The Agreement also provides a listing of existing permits which shall have the Concessionaire added as co-permittee with the Authority. The Concessionaire shall be obligated, pursuant to the Agreement and as permitted by law, to fulfill all of the requirements of all such permits subject to the terms of the Agreement. The Authority will cooperate and participate, as required of the Sewer System owner, with the application for required permits and permit renewals as required for operation of the Sewer System in accordance with these standards and applicable law, as detailed in the Agreement. Failure to comply with permit conditions and/or the Operating Standards requirements set forth by the Authority may result in assessment of OLDs by the Authority, in accordance with the Agreement, in addition to those penalties levied by regulatory agencies.

The Operator shall be responsible for complying with all applicable federal, state, and local laws and regulations pertaining to the Sewer System and shall comply with all approvals, licenses, permits, and certifications governing the performance of its Services hereunder issued for or with respect to the System.

These Operating Standards establish the general requirements for the operation, maintenance, and management of the major Sewer System components. The provisions included are intended to address the major activities required, but all specific activities that are necessary for meeting the performance requirements set forth herein and/or applicable laws and regulations shall be the responsibility of the Concessionaire. The Concessionaire may adopt, in whole or in part, the Authority's O&M manuals, standard operating procedures (SOPs), computerized maintenance management system (CMMS), and/or other systems or procedures. Alternately, the Concessionaire may establish new procedures. Regardless of the origination of operating procedures, the Concessionaire shall be responsible for determining such specific

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activities and performing all necessary operation, maintenance, and management activities to meet the requirements defined herein, applicable laws and regulations, and maintain the condition and performance of the Sewer System.

The Concessionaire is responsible for maintaining procedures, records, and systems, as required, to facilitate reporting operational performance, service history data, and other records and data to the Authority as required by the Agreement and Operating Standards. The Concessionaire shall provide the Authority a copy of all revised SOPs and proposed report forms during the transition period. The Concessionaire shall advise the Authority of any significant changes to SOPs throughout the term of the Agreement. The Authority reserves the right, upon reasonable notice and during normal business hours, to conduct onsite inspections of facilities, and the Concessionaire is required to provide, upon the Authority's request, performance, operation, maintenance, and/or other records pertaining directly to the operation and maintenance of the Sewer System.

The roles and responsibilities of the Authority and the Concessionaire are further specified herein and in the Agreement.

## **1.2 Specialized Computer Software**

The Authority utilizes a variety of specialized software packages, as summarized for the Concessionaire's reference in Exhibit B. The software summary is considered to be a complete list, provided for the Concessionaire's information, but actual computer software packages used by the Authority staff may vary. The Concessionaire, with the cooperation of the Authority, shall be responsible for determining the applicability and status of licensing fees, operating fees, contractual obligations, and/or other requirements or obligations associated with continued use of each software system. However, these systems may be used to facilitate and accomplish the responsibilities and objectives of these Operating Standards. The Concessionaire shall be responsible for data migration, conversions to other software systems, and any similar activity related to computer software systems.

The Authority will provide a data set to the Concessionaire. The Concessionaire will be responsible for maintaining the Water System and Sewer System data set. The Concessionaire should use the data model framework provided by the Authority as a basis for maintaining feature and attribute information. The Authority and the Concessionaire will maintain separate systems and will share data as required. The Concessionaire and the Authority agree that the shared data sets will be for use by the Concessionaire and the Authority within their respective organizations in the furtherance of their mission and approved work program and not to be disclosed to third parties except as required by law or permitted by the Authority.

At the time of return of the System to the Authority, either at the end of the term of the Agreement or at the time of termination of the Agreement, the Concessionaire will use its reasonable efforts to convey the software systems in use at that time, in their entirety if possible, to the Authority or the new System operator.

Equipment manufacturer information and maintenance information has been recorded in the CMMS systems for both the Water and Sewer Treatment Plants. The Concessionaire shall

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maintain equipment maintenance task assignments established by the Authority, but may modify the maintenance management system currently in place. The Concessionaire shall keep a record of system or unique identifier changes, as it is the Authority's intent to utilize the coded system and assigned unique equipment identifiers to verify the Concessionaire's performance of maintenance activities in accordance with these Operating Standards.

**2.0      Standard Operating Procedures**

The Concessionaire shall maintain the existing or develop and implement SOPs relating to all aspects of Sewer System operation, including but not limited to the following general areas:

- a. Operation and Maintenance of the Influent Screens;
- b. Operation and Maintenance of the Raw Sewage Pumps;
- c. Operation and Maintenance of the Aerated Grit and Grease Removal;
- d. Operation and Maintenance of the RAS and WAS pumping system;
- e. Operations and Maintenance of the Final Settling Tanks;
- f. Operation and Maintenance of the Chlorination Process;
- g. Operation and Maintenance of the Post Aeration system;
- h. Sludge Wasting and Management;
- i. Operation and Maintenance of the Auto-Thermal Aerobic Digestion (ATAD) Process;
- j. Sludge Thickening Dewatering and Disposal;
- k. Valve and Piping Maintenance;
- l. Instrumentation Maintenance;
- m. Laboratory Sampling and Analytical Procedures;
- n. Laboratory Quality Manual;
- o. Security Protocols;
- p. Septage and Hauled Wastes Receiving and Handling Protocols;
- q. Wet Weather Operating Protocols; and,
- r. Operation and Maintenance of the Emergency Power Generation System.

Detailed SOPs must be developed for all critical process and administrative functions. The Authority has developed and implemented SOPs related to WWTP operation and maintenance functions which the Concessionaire may adopt or revise, upon Authority approval. The Concessionaire shall review these existing SOPs during the Transition Period to determine which of the SOPs will be continued and which SOPs will be revised to reflect (which approval shall not be unreasonably withheld or delayed) current operating strategies and ensure safety. New SOPs must be developed where needed, and operations personnel shall be trained in each new and revised SOP.

SOPs pertaining to the treatment processes shall include guidelines for the operations staff related to process control, equipment operation, and general maintenance. Reference can be made to manufacturer's operation and maintenance manuals and other readily available resources where applicable. The Laboratory SOPs shall provide sampling protocols, analytical procedures, equipment operation and maintenance guidelines, and records keeping protocols. Authority



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resources, including existing SOPs previously developed and implemented by the Authority, may be adopted to satisfy this requirement or used as a reference in generating new SOPs.

**3.0      Wastewater Treatment Plant Performance Standards**

**3.1      Regulatory Requirements**

Wastewater treatment plant operation and performance are governed by state and federal regulations. The Concessionaire must comply with all applicable regulations. Statutes and regulations promulgated by the Commonwealth of Pennsylvania relating to wastewater treatment and sludge management which may be applicable include, but are not limited to, the following:

- a.    Clean Streams Law (P.L. 1987, No. 394).
- b.    Title 25 – Rules and Regulations of the Department of Environmental Protection.
  1.    Chapter 91 – General Provisions
  2.    Chapter 92a – NPDES Permitting, Monitoring, and Compliance
  3.    Chapter 93 – Water Quality Standards
  4.    Chapter 94 – Municipal Wasteload Management
  5.    Chapter 95 – Wastewater Treatment Requirements
  6.    Chapter 96 – Water Quality Standards Implementation
  7.    Chapter 252 – Laboratory Accreditation
  8.    Chapter 271 – Municipal Waste Management – General Provisions
  9.    Chapter 273 – Municipal Waste Landfills
  10.   Chapter 275 – Land Application of Sewage Sludge
  11.   Chapter 302 – Administration of the Water and Wastewater Systems Operators' Certification Program

Federal regulations related to wastewater treatment and sludge management which may be applicable include the following:

- a.    Clean Water Act (33 U.S.C. §1251 et seq.).
- b.    Title 40 of the Code of Federal Regulations – Protection of the Environment.
  1.    Part 122 – NPDES Regulations
  2.    Part 125 – Technology Based Standards
  3.    Part 129 – Toxic Pollutant Standards
  4.    Part 131 – Water Quality Based Standards
  5.    Part 133 – Sewage Secondary Treatment Regulations
  6.    Part 135 – Citizen Suits
  7.    Part 136 – Analytical Procedures
  8.    Part 503 – Sewage Sludge Disposal Standards

Industrial Pretreatment Program (IPP) regulations are administered by EPA in Pennsylvania, and are outlined generally under Title 40 of the Code of Federal Regulations related to the development, implementation, and management of IPPs. The following are applicable.

- a.    Part 401 – General Effluent Guidelines and Standards.

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- b. Parts 402 to 424 – Effluent Guidelines and Standards.
- c. Parts 425 to 471 – Effluent Guidelines and Standards.

Other laws and regulations may apply. It is the responsibility of the Concessionaire to determine which regulations are applicable and to comply fully with those regulations.

**3.2      WWTP Effluent and Performance Standards**

***3.2.1   NPDES Discharge Permit Effluent Limits and Performance Standards***

The WWTP operates under NPDES permit PA 0020664 that was reissued effective March 1, 2008, along with a permit amendment issued on June 1, 2009 to modify the compliance schedule in Part C.1.B. A second amendment was issued on February 14, 2011 to modify the effective dates in Parts C.1.C. The Concessionaire will be responsible for compliance with all current and future discharge limitations. The effluent limits in the current NPDES permit are summarized in Table B-1 below.

**Table B-1: NPDES Discharge Permit Effluent Limitations**

<b>Parameter</b>	<b>Monthly Average Effluent Limit</b>	<b>Weekly Average Effluent Limit</b>	<b>Instantaneous (Daily) Maximum Effluent Limit</b>
Carbonaceous Biochemical Oxygen Demand (CBOD <sub>5</sub> )	25 mg/L	40 mg/L	50 mg/L
Total Suspended Solids (TSS)	30 mg/L	45 mg/L	60 mg/L
Total Phosphorus	2.0 mg/L	---	4.0 mg/L
Fecal Coliform May 1 to September 30	200/100 ml geometric mean		
Fecal Coliform October 1 to April 30	2,000/100 ml geometric mean		
Residual Chlorine	0.5 mg/L	---	1.6 mg/L
pH	6.0 to 9.0 SU		
Dissolved Oxygen	5.0 mg/L minimum		
Total Nitrogen Limit	40,182 lbs.		
Total Phosphorus Limit	5,358 lbs.		

In addition to the effluent limits in Table B-1 above, the minimum percentage removal as a monthly average under 40 CFR 133 for BOD<sub>5</sub> and TSS is 85%. This summary does not replace the terms as set forth in the NPDES permit.

The Authority recognizes that performance may be impacted to some extent by the magnitude of WWTP influent flow and loadings. Should the flow and loadings to the WWTP increase appreciably beyond that which the Authority has experienced, the Concessionaire will so advise the Authority and provide documentation of the extent and duration of those increases.

***3.2.2   NPDES Permit Discharge Limits Operational Liquidated Damages***

Absent evidence of actions or circumstances outside the Concessionaire's control or due to the fault of others, OLDs of \$5,000 will be assessed by the Authority for each regulatory

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discharge limit (refer to Table B-1) exceeded for every month in which an exceedance occurs. Assessment of OLDs is separate from, and in addition to, any enforcement action taken by a regulatory agency. Also, the Concessionaire will be responsible for any fines, penalties, and/or any enforcement action assessed by a regulatory agency for noncompliance with any NPDES permit requirement or provision.

***3.2.3 Performance Standards Operational Liquidated Damages***

Absent compelling evidence of actions or circumstances outside the Concessionaire's control or due to the fault of others, failure to comply with the Performance Standards in Table B-2 for CBOD, and TSS will result in OLDs of \$500 per parameter for each month of noncompliance. If the annual average for any of these specific parameters exceeds the Performance Standard, additional OLDs of \$2,500 for each parameter shall be assessed by the Authority.

***3.2.4 Reuse of Treated Effluent***

Recognizing that treated effluent is of sufficient quality that it could be used for certain industrial, commercial, recreation, or agricultural purposes, the Concessionaire is free to explore opportunities. Such an undertaking, before being finalized, would require further negotiation between the Authority and the Concessionaire to include revenue sharing and approval by the Authority.

**3.3 Process Control Monitoring/Sampling Plan**

To consistently achieve performance levels specified in wastewater permits, a comprehensive facilities maintenance program, as well as consistent and complete operational control protocols are required. Process control decisions need to be based on reliable plant operating data. Therefore, the Concessionaire shall develop and implement a sampling and monitoring program that will provide process performance and operational data needed to make proper process control decisions. Sampling and monitoring requirements for the wet-end treatment processes are summarized in Exhibit J. Sampling and monitoring requirements related to the sludge management process are summarized in Exhibit K. The data will be recorded and maintained electronically for a period of no less than five (5) years, along with process control parameters developed from the monitoring data.

**3.4 Sludge Management**

***3.4.1 General Description of the Current Solids Management Program***

A description of the current sludge management program is included in Exhibit N for reference.

**3.4.2 Dewatering Performance Standards**

Table B-2 represents the 2013 average monthly dewatering output characteristics.

**Table B-2: Press Dewatering Performance History**

<b>Performance Parameter</b>	<b>Monthly Average Value</b>
Dewatered Biosolids Total Solids Content	22.4% to 28.3%
Solids Capture Rate	≥ 95%, by weight of dry solids

The values in Table B-2 are representative of performance history and operational goals and the Concessionaire will not be liable for OLDs if these goals cannot be achieved despite the reasonable efforts of the Concessionaire.

The solids capture rate is listed in Table B-2 to advise the Concessionaire that the centrate and other recycle streams returned to the headworks, in sufficient strength and/or quantity, can adversely impact unit process treatment performance. Consideration will not be given by the Authority for relief from, or negotiation of, performance standards due to the impact of recycle streams on process performance.

**3.5 Certified Operators**

The Concessionaire will comply with requirements of Chapter 302 of Title 25 of the PaDEP Rules and Regulations which currently require that process decisions be made by or under the supervision of a wastewater treatment plant operator certified to operate wastewater treatment plants in Pennsylvania. Absent Authority approval, Concessionaire shall employ at least one (1) certified wastewater treatment plant operator for each shift, or have a certified operator on call to respond to process control issues that may arise at the WWTP or in the collection system.

**3.6 Noise, Outside Lighting, and Odor Control**

**3.6.1 General Requirements**

The Concessionaire shall operate the WWTP to minimize the potential for noise or excessive lighting. No odors shall persist off-site. To the extent possible, and without jeopardizing operational performance or flexibility, equipment should be operated during the day rather than at night, when the prevention of noise pollution is more critical. If necessary, noise abatement measures shall be implemented to reduce noise levels. Similarly, site or portable lighting should be controlled, as practicable, to minimize light trespass onto adjoining properties.

Noise, odor, and light trespass complaints must be investigated in a timely manner to identify the source(s) of the complaint. All complaints must be reported to the Authority in a timely fashion. The time of the complaint, the atmospheric conditions (*i.e.*, temperature, presence of precipitation, wind speed and direction, etc.) at the time of the complaint and any other relevant information regarding the complaint must be recorded. Steps to mitigate the offending noise, odor, or lighting must be implemented as soon as practicable. A follow-up investigation shall be made by the Concessionaire following implementation of a solution to

determine the effectiveness of the solution. Further remediation steps shall be taken by the Concessionaire, if necessary.

### ***3.6.2 Odor Control***

Because of the WWTP's geographic location in the Borough, odor control is a top priority. Odor control systems, procedures, and protocols are presently in place to prevent odors from emanating from the site. The Concessionaire may continue to follow these systems, procedures, and protocols, or may propose alternate methods, upon Authority approval, provided that no offsite odor complaints are generated.

Offsite odors will not be tolerated. In the event that an odor complaint is received, the Concessionaire will immediately visit the area in which the odor was detected and interview the individual making the complaint. Following the interview, the Concessionaire will tour the WWTP to identify potential sources and causes for the odor. The Concessionaire will immediately take action to mitigate the source and/or cause(s) of the odor.

The Concessionaire shall notify the Authority the same day the odor complaint occurs, or the next business day if the complaint occurred after normal business hours. A detailed odor complaint report shall be prepared by the Concessionaire and submitted to the Authority, as described in the Customer Service section of these Operating Standards.

### ***3.6.3 Operational Liquidated Damages***

Based on the number and frequency of odor complaints and verification of the validity of the complaints and resolution and absent evidence of actions or circumstances outside the Concessionaire's control or due to the fault of others, OLDs will be assessed in an amount up to \$1,000 per occurrence. The Authority shall advise the Concessionaire of the basis for the OLDs.

## **3.7 Operator Training**

The Concessionaire is responsible for safety and health training for existing and newly hired employees. Process training will include familiarization with all SOPs and other operating protocols. Safety training will be conducted periodically for new and existing employees to familiarize the staff with potential dangers related to equipment and processes, particularly fire and explosion dangers, dangers associated with toxic or corrosive gases or liquids, and dangers related to electrical equipment. Training may be performed by in-house experts. However, industry safety professionals should be contracted to provide training when in-house expertise is not available.

## **3.8 Industrial Pretreatment Program**

The Concessionaire will work with the Authority to develop and administer the Authority's Industrial Pretreatment Program (IPP) in accordance with the Borough's ordinances and EPA IPP regulations. In that regard, the Concessionaire will be responsible for following tasks related to the Authority's IPP:

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- a. Perform compliance sampling and monitoring of the permitted industrial users and any other users whose discharges may impact loading or performance of the WWTP;
- b. Review and record the results of self-monitoring performed by permitted users in the service area;
- c. Identify and recommend enforcement action to the Authority and contributing municipalities for users found to be in violation of the Borough's ordinances, EPA regulations, or the users' permits;
- d. Advise the Authority with respect to issuing permits to new users, and reissuing expiring permits to existing permitted users;
- e. Survey, with Authority cooperation, the WWTP service area to inventory and identify users that may warrant monitoring and/or permitting at least one (1) time every five (5) years, and provide a summary report to the Authority;
- f. Advise Authority regarding periodic updates of the Authority's local pretreatment limits in accordance with the IPP requirements in the WWTP NPDES discharge permit; and
- g. Prepare the annual reports required under the Authority's IPP and EPA regulations, including posting of user violations of the IPP as required by law.

The Concessionaire shall report IPP activities performed to the Authority on an annual basis. The report will include:

- a. A summary of monitoring performed during the year;
- b. Enforcement actions recommended based on monitoring activities performed;
- c. A listing of new permits issued and existing permits renewed; and
- d. Any other activities performed in connection with the Authority's IPP.

Concessionaire shall be entitled to receive the revenue from permits and fines imposed by the Authority pursuant to the IPP.

#### **4.0 Computerized Maintenance Management System**

The Concessionaire shall adopt the Authority's, or develop and maintain a, CMMS for managing, scheduling, and recording preventive and corrective maintenance for all wastewater treatment, conveyance, and collection systems equipment, buildings, and structures. The CMMS will contain essential maintenance, warranty, and baseline condition information generated from an audit of the equipment and historical repair records. The CMMS system shall perform the following functions:

- a. Inventory all equipment, buildings, and structures;
- b. Schedule preventive maintenance activities;
- c. Track repair warranties;
- d. Provide easily accessible records of installation date, and maintenance history;
- e. Generate work orders; and
- f. Record maintenance activities.



All maintenance work performed shall be recorded in the CMMS, including equipment maintenance and inspections, sewer pipe cleaning and televising, test results, repairs and replacements, and work performed by subcontractors. Documentation for work completed shall be maintained as one record and shall include a detailed description of the work performed, who performed the work, and all parts and materials used.

## **5.0 Sewer Utility System Maintenance**

### **5.1 Wastewater Treatment Plant Maintenance**

The Concessionaire will be responsible for all maintenance activities related to the Wastewater Treatment Plant including, but not limited to the following.

- a. All fixed and non-fixed equipment shall be operated and maintained in accordance with manufacturer's instructions, and the OMP.
- b. Valves shall be exercised regularly in accordance with the OMP and manufacturer's recommendations, at a frequency of not less than once (1) times per year.
- c. Instrumentation and control devices at the WWTP shall be calibrated in accordance with manufacturer's recommendations and at a frequency of not less than annually. Plant effluent flow meter calibration is required on an annual basis or more frequently if recommended by the manufacturer. Certificates of calibration are required, and shall be provided to the Authority, to verify the performance of each flow meter.
- d. Surface damage and pitting of painted surfaces shall be properly prepared and repainted as soon as practical.
- e. Paint and coatings on all painted/coated surfaces, including building interiors and exteriors, equipment, tanks, etc., shall be maintained in good condition. Surfaces shall be repainted, as required, to maintain a completely intact surface coat and to protect the surface from rust, corrosion, rot, or further deterioration.
- f. Equipment, valve, pipe, and tank identification tags and markings shall be maintained and replaced, as required.
- g. Mechanical equipment preventive maintenance activities shall include, but not be limited to:
  1. Oil changes in accordance with equipment manufacturer's recommendations;
  2. Maintaining oil and grease levels in accordance with manufacturer's recommendations;
  3. Painting and maintaining surface coatings;
  4. Draining condensate;
  5. Inspecting and verifying proper operation; and
  6. Replacing normal wearing parts.
- h. The following tanks and vessels shall be drained and inspected at the frequency noted, or more frequently if required, to evaluate the condition of internal structures and equipment, and to remove accumulations of grit and other settled debris. Within six (6) months of the date of Closing, the Concessionaire shall provide to the Authority a schedule for performing this work. The Annual Report will include a section summarizing the inspection, any subsequent work performed, and work planned as a result of the conditions found during the inspection.



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1. Grit chambers; wet wells; oxidation ditches and final clarifiers; and sludge thickeners – every 1 to 2 years.
2. Digesters and sludge storage tanks – every 5 to 7 years.
- i. Sludge and chemical pipelines shall be drained and flushed when the process is removed from service for maintenance, or more often as required to prevent accumulation of debris in the pipeline that could impact operation of the pumping system or otherwise cause corrosion or degradation of the piping system. In addition, valves shall be serviced while associated tanks are out of service, as many are inaccessible when the vessel is full, e.g., isolation valves on the Anaerobic Digesters.
- j. Spills shall be cleaned up promptly to maintain cleanliness, prevent unsafe conditions, and reduce the potential for odor generation.

Exhibit E summarizes the services for which the Authority contracts for maintenance at the WWTP which will need to be continued by the Concessionaire. These contracts should be reviewed by the Concessionaire. The Concessionaire may self-perform or change vendors utilized for these services, but the scope of service and frequency of maintenance shall not be less than defined in the Authority's contracts.

The Concessionaire shall include in the monthly report to the Authority a tabulation of major equipment taken out of service, the date that the equipment was taken off-line, reasons for taking the equipment off-line, and the date that the equipment was or is expected to be returned to service. The Authority shall also have the right during normal business hours and with notice to the Concessionaire, to periodically conduct inspections of the Sewer System and request operations staff to demonstrate the maintenance history of selected equipment. The Concessionaire shall cooperate with inspections and requests for information by the Authority.

## **5.2 Collection and Conveyance Systems**

### ***5.2.1 Pumping Station Monitoring***

The Concessionaire is responsible for monitoring operation of all pumping stations.

### ***5.2.2 Collection System Operation and Maintenance***

The Concessionaire shall be responsible for all operation and maintenance activities associated with the Authority's collection system, and shall maintain the collection system to provide uninterrupted service. Operation and maintenance activities will include, but not be limited to the following:

- a. Respond to reports of blockages or other emergencies in a timely manner;
- b. Clean and flush sewer lines and manholes as required, particularly in those areas that historically have required regular periodic cleaning to clear or prevent obstruction to normal flow and to minimize the potential for odors to develop;
- c. Treat for root intrusion as required, particularly in those areas that historically have required regular periodic treatment;
- d. Repair or replace sanitary sewer lines that are damaged or collapsed;
- e. Replace broken or missing manhole lids and/or manhole frame assemblies as required;

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- f. Install new or replace damaged or missing manhole inserts in those manholes determined to be subject to surface flooding and that allow surface water inflow through the manhole cover into the sanitary Sewer System; and
- g. Respond to all PA One Call requests.

It will be the responsibility of the Concessionaire to coordinate GIS issues with the Authority as defined herein. Ownership of the GIS platform and data will remain with the Authority. Records of all maintenance activities will be maintained in the CMMS and GIS System where applicable.

The Authority has a preventive maintenance program in place for minimizing accumulations of fats, oils, and greases (FOG) in the collection system. The Concessionaire shall implement a FOG preventive maintenance program similar to the current Authority program.

The Concessionaire will also prepare and implement a Collection System Inspection and Maintenance Plan (CCIMP) that provides a systematic approach for inspecting, televising, cleaning, and flushing every manhole and sanitary sewer run in the Authority's Collection system. The preventive maintenance activities performed under the CCIMP are in addition to the maintenance activities described above. The intent of the work performed under the CCIMP is to identify and mitigate sources of infiltration and inflow (I/I) to the sanitary Sewer System, thereby reducing the potential for surcharging and overflows in the Sewer System and WWTP. In addition to the I/I reduction, damaged or partially blocked sections of sanitary sewer piping or manholes shall be identified and repaired, thereby improving the condition of the system and reducing the potential for flow obstruction and odor generation.

As part of the Concessionaire's CCIMP, the Concessionaire will be required to annually flush and televise at least approximately 15% of the collection system's approximately 131,000 Linear Feet. The Concessionaire will identify any developing blockages that are encountered but cannot be dislodged at the time of flushing and televising. The Concessionaire will schedule removal of these blockages. Any areas with root intrusion will be identified and included as part of the root intrusion program. Any section of the collection system that shows significant leakage will be logged and incorporated into the Concessionaire's I/I remediation planning. If it appears that any segment of the collection system is in danger of collapsing, the Concessionaire will prioritize this section for repair or replacement.

The Concessionaire will provide annual reports noting the length of collection system televised, the location and date of developing blockages identified, the location and date of root intrusion identified, the location and date of areas of significant leakage, and the location and date of any potentially collapsing lines.

The Concessionaire shall be required to obtain road opening permits for work it performs in the public roads; however, neither the Borough nor the Authority shall impose any fees for obtaining such permits.

***5.2.3 Operational Liquidated Damages***

Absent evidence of actions or circumstances outside the Concessionaire's control or due to the fault of others, failure to clean and televise approximately 15% of sanitary sewer pipe annually will result in OLDs of \$1,500. Additional OLDs of \$500 will be assessed by the Authority if the cleaning and televising program is not on schedule within three (3) months following the end of the year and for each additional three (3) month period that the Concessionaire fails to recover the program schedule.

If the required length of sewer pipe has not been cleaned and televised for the current and preceding year, OLDs of \$3,000 will apply and quarterly OLDs will be doubled. Both quarterly and annual OLDs will remain at these higher levels each and every time OLDs are assessed by the Authority following the initial occurrence.

***5.2.4 Root Intrusion***

The Concessionaire will review the Authority's current program for root intrusion control in the collection system. The current program contains certain guarantees and protocols that shall be maintained, as the program has been successful. The Concessionaire may perform the work in-house or change vendors, but the goals and extent of the program must be maintained. The Concessionaire's annual report to the Authority shall include the length of sewer pipe receiving treatment.

***5.2.5 New User Connections***

The Concessionaire will install new connections to the Sanitary Sewer System to serve new customers, or for existing customers who require a new connection. The connection will be constructed in accordance with the Authority's Standard Materials and Construction Specifications and Pennsylvania's Uniform Construction Code. The Concessionaire will document the location and depth of the connection and maintain that information as permanent record. The Concessionaire will provide a record of the installation to the Authority. Concessionaire shall be entitled to receive any connections fees paid by new users of the Wastewater System.

***5.2.6 Inspection of New Construction***

The Concessionaire shall be responsible for inspection of construction work associated with the installation of new lateral or sanitary sewer pipe, or the repair of existing sanitary sewers and laterals within the Authority. The Concessionaire shall ensure that the construction methods and materials are consistent with Borough, State, and other applicable construction regulations. The Concessionaire will prepare and maintain on record one-line diagrams describing the location of new or repaired laterals. Construction inspection efforts will be detailed in the Concessionaire's monthly report to the Authority.

***5.2.7 Streets Program Participation***

The Borough is considering implementation of an annual Streets Program that selects streets and/or alleys within the Borough for reconstruction or resurfacing. The Concessionaire shall attend the planning meetings and all progress meetings associated with the Streets Program

and contribute to the discussion relative to the Concessionaire's obligations and objectives. A fundamental concept of the program is that after a street has been reconstructed or resurfaced as part of the program, the need to reopen the street for remedial infrastructure work will be minimized for an extended period of time. As such, it is imperative that underground utility maintenance, repair, and/or replacement is performed concurrently with the Streets Program, when the condition of underground utilities may require maintenance, repair, or replacement in the near term.

The Concessionaire shall be responsible for cleaning and televising the sewer lines in the selected streets. The Concessionaire shall be responsible for repair or replacement of damaged or leaking sections and associated facilities, as necessary. The repaired or replaced lines shall be televised by the Concessionaire after the work has been completed to verify that the work has been successful.

All manhole elevations will be adjusted when necessary. The Concessionaire will supply, if necessary, and reset all manholes to proper line and grade for all reconstructed streets and supply all risers and rings for all overlaid Streets. The Concessionaire will also provide these same materials for all Authority contractor agreements. If in good condition, risers and manhole frame and cover assemblies may be reused.

The age, type of pipe, pipe break/leak history, and other relevant factors will be used to determine if the sanitary sewer pipes in the selected street should be replaced as part of the Streets Program. If replacement is determined to be necessary in the judgment of the Concessionaire, the Concessionaire will be responsible for replacement of those sections of the pipe.

In performing these activities associated with the Streets Program, the Concessionaire will be responsible for all tasks normally associated with the work activities related to the Sewer Utility System; provided, however, that Concessionaire's restoration obligation shall be limited to bringing the base up to the level of the street. All work shall be completed in conformance to Authority codes and ordinances and other applicable requirements.

All pertinent information related to the maintenance, repair, and/or replacement of Sewer System infrastructure associated with the Streets Program shall be reported to the Authority and properly documented. The Concessionaire's participation and performance with respect to the Streets Program will be an agenda item in the quarterly meetings.

#### ***5.2.8 Sinkhole Responsibilities***

The Concessionaire shall immediately notify the Authority of any sinkholes identified by or brought to the attention of the Concessionaire. The Concessionaire will be fully and directly responsible for repairs, remediation, and replacement of all Sewer System components damaged as a result of a sinkhole arising due to a leak from the Wastewater System within the curb lines of the street; provided, however, Concessionaire's restoration shall be limited to bringing the base up to the level of the street. Repairs and replacements will be backfilled in accordance with Authority Standards. All manhole and water valve elevations will be adjusted when necessary. The Concessionaire will supply, if necessary, and reset all manholes and water valve boxes to

proper line and grade for all reconstructed streets and supply all necessary risers and rings for all overlaid streets. If in good condition, risers and manhole frame and cover assemblies may be reused. All work will be coordinated with the Authority and other utility providers.

All work shall be performed in conformance with Borough codes and ordinances, and all pertinent information shall be properly documented.

### **5.3 Maintenance of Flood Protection Project**

The Concessionaire shall assume all maintenance and other requirements of the Federal Flood Protection Project. At all times, vehicular access to the treatment plant outfall shall be maintained. Application of herbicides may be required in certain areas to control vegetative growth. The US Army Corps of Engineers periodically inspects the flood protection project and issues reports noting areas that need to be addressed. The activities identified on these reports shall be the responsibility of the Concessionaire.

### **5.4 Capital Improvements**

#### ***5.4.1 General Requirements***

Capital Improvements to the WWTP, collection system, and flood control assets will be the responsibility of the Concessionaire. Capital Improvements will be constructed using methods and materials selected by the Concessionaire and compliant with the Borough's ordinances and the UCC. The Concessionaire will advise the Borough of the need for the capital improvement and will be responsible for all engineering and design work associated with the project. To the extent practicable, all new improvements will be energy efficient and cost-effective. New construction and renovation work will be designed, constructed, and operated in accordance with the Energy Management and sustainability requirements defined herein.

#### ***5.4.2 Capital Improvement Planning***

Capital Improvement Planning shall be performed by the Concessionaire and shall include a comprehensive facilities inspection, system performance evaluation, and development/update of a long-term improvement plan including project cost estimates. The Concessionaire shall implement a long-term master planning/capital improvement planning process that shall harmonize with provisions set forth in the Agreement at §7.1(f). The Comprehensive Planning Study shall be performed at 5 year intervals. The Concessionaire shall either perform the study using its own engineer or contract with an outside professional engineer registered in Pennsylvania, provided either engineer must have a minimum of 10 years experience conducting similar studies. The Concessionaire shall provide the final study report to the Borough, include the long-term planned Capital Improvements and associated activities in routine reports to the Borough, and routinely report on progress. The Concessionaire shall be responsible for executing Capital Improvements under the process set forth in the Agreement. Progress on ongoing Capital Projects will be an agenda item during quarterly meetings.

***5.4.3 Energy Management and Sustainability***

The Concessionaire shall establish a program to review and optimize energy usage, including at a minimum:

- a. Review of energy usage, identification of energy use trends, and cost or usage tracking versus time.
- b. Consideration of energy efficiency improvements and equipment and/or operational modifications.
- c. Consideration of energy costs in evaluation of new system facilities.
- d. To the extent practicable, all capital improvement projects related to system infrastructure and associated facilities shall incorporate concepts of sustainable design.
- e. The Concessionaire shall include sustainability, energy use, and the status of energy efficiency initiatives as part of the routine monthly reports to the Authority.

**6.0 Wastewater Treatment Plant Laboratory Requirements**

**6.1 Requirement to Maintain a Laboratory at the WWTP**

The Concessionaire will maintain and staff a laboratory at the WWTP or contract with an outside laboratory capable of performing the analyses required for process control and sludge management as identified in these Operating Standards, as well as those analyses required to be reported for compliance with the NPDES permit. The Concessionaire will be responsible for all costs associated with operating and maintaining the laboratory, including but not limited to analytical and sampling equipment maintenance, quality control, training, and reagents and other materials required for performing the analyses.

The Concessionaire may contract with an outside laboratory. The Concessionaire will be responsible for contracting with the outside laboratory and will be responsible for all costs associated with sampling and analysis.

A Quality Manual has been developed by the Authority and is currently in use related to laboratory operations. The Concessionaire will review the Manual. The Concessionaire may continue to use the current Manual, or upon Authority approval (which approval shall not be unreasonably withheld or delayed) make revisions. If revisions to the Manual are made, the revised Manual must comply with the requirements for PaDEP's laboratory accreditation program under Pa Title 25, Chapter 252.

**6.2 Laboratory Accreditation**

The WWTP laboratory currently performs or contracts to perform the following analyses:

- a. Biochemical Oxygen Demand (BOD<sub>5</sub> and CBOD<sub>5</sub>);
- b. Total Suspended Solids;
- c. Total Solids;
- d. Ammonia-Nitrogen;
- e. Fecal Coliform (membrane filter method);

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- f. Residual Chlorine;
- g. pH; and
- h. Residual Dissolved Oxygen.

The Concessionaire shall perform the above listed analyses and receive/maintain accreditation for those analyses unless the Concessionaire has contracted with an outside lab for these services. The Concessionaire will be responsible for all costs associated with the accreditation process, including but not limited to proficiency testing, quality control, and fees payable to PaDEP, as enumerated at PA Title 25 Chapter 252.204.

### **6.3 Quality Control Reporting**

The Laboratory Supervisor will provide the following written certification to the Authority each month with the NPDES Discharge Monitoring Reports to be submitted to PaDEP and EPA.

"I hereby certify that the analytical results reported in this NPDES Discharge Monitoring Report were obtained from analyses performed in accordance with the methods approved under 40 CFR 136, and that the appropriate quality control measures contained in the approved Quality Manual were strictly followed."

The Concessionaire will report the results of proficiency testing performed in accordance with PA Title 25 Chapter 252 to the Authority. Any failed proficiency tests must be reported to the Authority, along with a detailed description of the measures taken to correct the deficiencies.

## **7.0 Customer Service**

### **7.1 Customer Service Center**

The Concessionaire shall maintain a Customer Service Center (Service Center) staffed with representatives who will be available Monday through Friday, except on Holidays, during normal business hours to provide assistance to customers of the system for billing or service issues. The Service Center can serve both water and wastewater customers. The Concessionaire will dedicate office space for use as a Service Center, but may, upon Authority approval, utilize its pre-existing Service Center facilities.. The Service Center will be located in an area easily accessible to customers. The Service Center will be equipped with telephones capable of accommodating a minimum of three (3) separate, simultaneous calls. A separate and distinct customer service telephone number will be established. In addition to the Service Center, the Concessionaire will establish a Call Center that will be available 24 hours per day, 7 days per week, including holidays, where customers can report emergencies or complaints.

### **7.2 Customer Call Protocol**

The Concessionaire will record the following information regarding customer calls received at either Center:

- a. Customer's name and location;
- b. Complaint/issue or subject of the call;



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- c. Time of call received;
- d. Time of response;
- e. Actions taken; and
- f. Customer call-back, if requested or appropriate.

The Concessionaire will maintain call records for a period of at least two (2) years. It is not necessary to provide copies of each individual report to the Authority. However, the Concessionaire shall provide a semi-annual report to the Authority that summarizes the information recorded and tabulates down the customer calls by type (i.e. billing issue, blockage, odor or noise complaint, personnel complaints, etc.). A summary of the call records will also be included, tabulated by category, in the Annual Report submitted to the Authority, along with a summary of the records for the previous two (2) years.

The Concessionaire shall have an action plan to address taste, odor, color, and staining problems, and similar complaints related to the aesthetic quality of the delivered water. Each complaint shall be logged, noting complainants name and contact information, time, nature, and location of delivered water in question. Each complaint shall be investigated and shall include, a customer interview and onsite testing upon the request of the complainant or the occurrence of other similar or potentially related complaints. The complainant shall be contacted within 48 hours to determine if the complaint has been resolved. Further investigation will be required if the problem has not been resolved to the satisfaction of the customer. The Concessionaire will submit a semiannual report to the Authority noting the information above, and Concessionaire conclusions relative to the complaint.

The Concessionaire shall report a summary of taste and odor complaints to the Authority quarterly. Each semi-annual report shall include data for the previous two (2) years, by category, for comparison purposes.

All complaints related to odors believed to be emanating from the WWTP will be directed to the Operator in Charge at the WWTP for investigation and follow-up. The Authority will be advised by the next working day after the Operator's investigation and follow-up and an individual report will be filed with the Authority noting the time and date of the complaint, the name and address of the complaining party, contact information for the complaining party, an account of the investigation noting any condition at the WWTP that may have been responsible for or contributed to the complaint.

## **8.0 Reporting Requirements**

### **8.1 Record Keeping, Data Review, and Reporting Requirements**

In addition to copies of all report submissions to regulatory and oversight agencies, the Concessionaire shall submit monthly, quarterly, and annual reports as defined in this section and throughout these Operating Standards. Several of the required reports will be similar to those being generated by Authority personnel at the time of Closing. The monthly operating reports from each treatment facility are of particular importance to the Authority. The reports provided by the Concessionaire to the Authority shall provide similar information. An example monthly report is included as Exhibit L, for reference. The Concessionaire may modify existing report

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formats, as necessary, for compliance with Authority requirements and the Concessionaire's use. Other reports have not historically been prepared by Authority personnel and, in such cases, the Concessionaire shall be responsible for developing a report format.

In all cases, within 120 days of Closing, the Concessionaire shall submit proposed report forms for approval by the Authority(which approval shall not be unreasonably withheld or delayed), which shall verify that the required and necessary information will be provided by the proposed report form in a manner that facilitates understanding of the material presented. Each report shall include a cover/summary sheet that includes the name of the report and time period covered, and briefly summarizes and highlights critical information contained in the report. The Concessionaire may combine multiple reports, for convenience, and all reports may be submitted in electronic format, at the Concessionaire's option.

The Concessionaire is responsible for maintaining procedures, records, and systems, as required, to facilitate reporting operational performance, service history data, and other records and data to the Authority as required by these Operating Standards and the Agreement. In addition to the required routine reports delivered to the Authority, the Authority reserves the right to conduct onsite inspections of facilities, and the Concessionaire is required to provide, upon the Authority's request, performance, operation, maintenance, and/or other records pertaining directly to the operation and maintenance of the System, to demonstrate compliance with the requirements of these Operating Standards.

All reports required herein shall be submitted to the Authority in a timely manner, as follows, and each shall have a separate cover describing the name of the report, time frame that the report covers, and any and all items that are deemed to be of significance to the Authority, as the owner of the system, or of possible consequence to the maintenance and operation of the System, particularly with respect to meeting the requirements of these Operating Standards.

The reporting deadlines are as follows:

- Monthly and Quarterly Reports      30 days after the end of the month or quarter
- Annual Reports      April 1, each year for the preceding year

If a report will not be submitted in accordance with the criteria above, the Concessionaire shall provide no less than two (2) days notice to the Authority.

Late submittals or failure to submit a report will result in the Authority assessing OLDs upon the Concessionaire as follows:

- 2<sup>nd</sup> Occurrence within 12 consecutive months      \$200
- 3<sup>rd</sup> Occurrence within 12 consecutive months      \$300
- 4<sup>th</sup> Occurrence within 12 consecutive months      \$500
- 5<sup>th</sup> Occurrence within 12 consecutive months      \$1,000
- Further occurrences will be subject to OLDs based on pertinent factors. OLDs are based on late filing of reports within 1 week. Failure to file the report within 1

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week following the due date will result in doubling of OLDs. OLDs are double for any regulatory report filed late or incomplete.

The Authority will evaluate monthly and quarterly reports received during the initial six (6) months following the date of Closing for content and format and advise the Concessionaire of its findings. The Concessionaire will have the opportunity at that time to offer suggestions to the Authority regarding report format and content. The Authority will similarly evaluate the first Annual Report for content and format and advise the Concessionaire of its findings. The Concessionaire will have the opportunity at that time to offer suggestions to the Authority regarding format and content of the Annual Report. Following these initial evaluations, the Authority and the Concessionaire may, from time to time, review the scope of the reporting obligations and the report format and may agree to modify the format or reporting requirements as appropriate.

The Concessionaire shall maintain the Authority's protocol or establish an Authority-approved protocol that is no less stringent, for complying with the reporting requirements of applicable regulations. The protocol shall designate who is responsible for the reports and the timing of submittal. The protocol shall include adequate lead time to acquire necessary approvals and meet the deadline for submitting the reports. The Concessionaire shall provide a copy of all reports and other documentation submitted to regulatory agencies to the Authority. All reports shall include a brief summary of the report.

## **8.2 Discharge Monitoring Reports**

The Concessionaire shall be responsible for timely preparing and submitting to the proper authorities the monthly Discharge Monitoring Reports (DMRs). The DMRs shall be prepared in accordance with State and federal regulations. A qualified person in a supervisory or managerial position shall be appointed by the Concessionaire to sign the reports. All data and information required for completing the discharge monitoring reports shall be developed and maintained by the Concessionaire. Exceedances or any other violation shall be noted and a detailed report submitted to the Authority. The Concessionaire shall be financially responsible for any fines or costs resulting from enforcement actions taken by PaDEP or EPA related to reporting or effluent quality violations, or any other violations related to operation and management of the WWTP in noncompliance with State or federal regulations or the NPDES discharge permit. Reports submitted to regulatory agencies shall also be submitted to the Authority the same day.

## **8.3 PaDEP Municipal Wasteload Management Annual Report**

The Concessionaire will assist and coordinate with the Authority relative to the preparation of the Municipal Wasteload Management Annual Report, also referred to as the Annual Chapter 94 Report, required under Title 25 Chapter 94 of the PaDEP Rules and Regulations. The Concessionaire will prepare the historical data and develop graphs and exhibits detailing historical flows and loadings, and projected flows and organic loading based on growth projections provided by the Authority. The Concessionaire will also prepare the report sections related to the condition of the system, the Industrial Pretreatment Program, new construction, and maintenance efforts, particularly related to infiltration and inflow reduction. The Concessionaire will also be responsible for obtaining current and projected flow and loading information from

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the contributing municipalities, as well as information related to the condition of the contributing municipalities' respective systems, maintenance efforts performed particularly with respect to infiltration and inflow reduction efforts, and sanitary sewer extensions.

All reports submitted to the Authority, except for those specific exceptions provided for by Section 708 of the PA Right to Know Act (Act 3 of 2008), will be made available to the public, upon request, in accordance with the requirements of the Act.

For exceedances of effluent criteria related to regulatory discharge limits listed in Table B-1 or the Performance Standards listed in Tables B-2, the report provided to the Authority will include the cause(s) of the noncompliance and measures taken to mitigate the violation and to prevent future violations

In addition to the monthly reports, the Concessionaire will meet quarterly with the Authority to review the Concessionaire's performance any issues related to the operation and maintenance of the system.

#### **8.4      Contributing Municipalities Flow Reports**

A separate report of the individual flows from the other contributing municipalities and the Authority, including a 12-month running average flow for the previous 24 month period, will be provided as a separate monthly report to the Authority. Copies of this report will be distributed to the other contributing municipalities and Authorities. An example Contributing Municipalities Flow Report is included as Exhibit M.

#### **8.5      Act 537 Planning**

The Authority is responsible for completing wastewater facilities needs assessments and planning required under PA Act 537 of 1966 (35 P.S. § 750, et seq) known as the Pennsylvania Sewage Facilities Act. The Concessionaire will assist the Authority with the completion of Act 537 Planning by providing applicable data.

#### **8.6      Internal Annual Performance Review**

Beginning in 2015 and annually thereafter, the Concessionaire will perform an internal Review of the Sewer Utility System operations and provide a detailed report to the Authority of its findings. The Review will include an examination of all SOPs related to process operations and maintenance and will identify deficiencies and corrective measures taken to mitigate the deficiencies. The Review will note and identify any concerns or issues that the Concessionaire believes will prevent or impede compliance with the Operations Standards or the Agreement, and will include recommendations for addressing each concern. The Review will also examine customer service issues, and will discuss the success of measures taken to improve customer relations and service.

## **9.0      Emergency Response Plan**

The Concessionaire will develop and implement an Emergency Response Plan (ERP) for the WWTP. The ERP will be developed in accordance with PaDEP's *Guidelines for the Development and Implementation of Environmental Emergency Response Plans* (document number 400-2200-001). The plan will establish emergency response protocols to address, at a minimum, the following hazards and emergencies:

- a. Sanitary sewer overflows;
- b. Chemical spills;
- c. Fire and explosions;
- d. Pipe, valve, or pump failures;
- e. Equipment or process failures;
- f. Power failures;
- g. Acts of God (i.e. floods, hurricanes, wind storms, etc.);
- h. Interceptor sewer force main collapse; and
- i. Personnel emergencies.

In accordance with the PaDEP Guidelines, the ERP will contain, at a minimum, the following information:

- a. Description of the facility;
- b. Material and waste inventory;
- c. Pollution incident history;
- d. Description of existing ERPs;
- e. Implementation schedule for plan elements not currently in place;
- f. Organizational structure of facility for implementation;
- g. List of emergency coordinators;
- h. Duties and responsibilities of the Coordinator;
- i. Chain of command;
- j. Spill Leak Prevention and Response;
- k. Countermeasures to be taken by Facility and Contractors;
- l. Evacuation plan for WWTP personnel;
- m. Emergency equipment available for response; and
- n. Emergency Spill Control Network, including
  1. Coordination with local ERP Agencies and Hospitals;
  2. Notification Lists; and
  3. Downstream notification requirements for storage tanks.

As a result of the Authority's use of four (4) 150 pound cylinders of gas chlorine for disinfection and odor control, the facility maintains a Risk Management Plan (RMP); the Concessionaire must take full responsibility for maintaining compliance with the Clean Air Act and Amendments related to Section 112(r) Accidental Release Prevention/Risk Manage Plan Rule.

### **10.0 Site Safety and Security Plan**

The Concessionaire will take all precautions necessary to safeguard persons entering the facilities, protect unauthorized access to the WWTP property and to protect water quality. A Security Plan shall be developed and implemented to include, but not be limited to, the following goals:

- a. Prevent unauthorized entry;
- b. Prevent interference with treatment processes;
- c. Prevent injury to employees, visitors, or neighbors; and
- d. Prevent loss or damage to Authority property.

Security policies incorporated into the Security Plan shall include, but not be limited to, the following features:

- a. Entrance gates will be securely locked during non-business hours.
- b. Fencing and gates will be periodically inspected and maintenance performed as needed.
- c. Building entry and fire alarm systems will be routinely monitored, inspected, tested, and maintenance performed as needed.
- d. Appropriate identification and documentation of authorization of all persons accessing the facilities will be required. Trespassing will not be tolerated, and will be referred to local law enforcement agencies.
- e. A record will be made of all persons accessing the facilities.
- f. Employees will report all suspicious observations to site management.
- g. Facility security checks will be conducted as part of normal operational rounds and will be documented in logbooks.
- h. Local enforcement agencies will be immediately notified in the event of an emergency situation.
- i. All security incidents will undergo review and corrective actions shall be taken to prevent recurrence.
- j. Staff and contractors working on site shall receive security training.

The Concessionaire shall notify the Authority within 2 hours of any security breach. The Concessionaire shall also be responsible for notifying PaDEP, as required, relative to any security breach. The Concessionaire shall submit a report to the Authority related to investigation results of any security breach.

### **11.0 Additional Requirements and Operational Liquidated Damages**

The Authority will issue Concessionaire a Notice of Violation (NoV) for any failure to comply with the requirements of these Operating Standards. The NoV will include any associated OLDs amount. The Concessionaire reserves the right to appeal the NoV and OLDs, and may provide information to the Authority to support the appeal. The Concessionaire must file a request for an appeal within seven (7) days of receipt of the NoV from the Authority. Unless appealed by the Concessionaire, payment of the OLDs will be due to the Authority within 30 days of the Concessionaire's receipt of the NoV.

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With respect to performance standards having annual requirements, it is expected that the Concessionaire shall consider the time of year and anticipated weather conditions when planning repairs and replacements. It is appreciated that unusual weather or possibly other factors beyond the control of the Concessionaire can adversely impact planned work activities.

If the Concessionaire believes that conditions beyond its control will result in a failure to comply with the requirements and possibly result in OLDs, the Concessionaire should advise the Authority in writing (electronic communication is acceptable) of conditions which may cause the delay and the anticipated timing of the completion of the work.

The Authority will give reasonable consideration for time extension based on the unanticipated nature and uncontrollability of the cause(s) of the delay and the Concessionaire's timeframe for completion of the work.

Allowances and relief from compliance with the Operating Standards will be made for events resulting from Force Majeure, as defined in the Agreement. In such event, the Concessionaire shall, as soon as practical, notify the Authority of the specific issues, impacts on compliance with any and all Operating Standards, actions being taken, and the schedule for returning to compliance. Force Majeure relief from requirements of the Operating Standards, relating to regulatory and permit requirements, will not apply for labor-related events, unless the applicable regulatory authority has specifically granted approval for such relief.

All OLDs noted in the Operating Standards will be increased every two (2) years, beginning on January 1, 2015, based on the Index and rounded up to the nearest \$50.

Quarterly meetings shall be scheduled between the Authority and the Concessionaire to allow for open discussions between the Concessionaire and the Authority related to issues of concern.

## **12.0 Alternative Approaches**

For all performance standards which have annual performance requirements, the Authority will allow alternative approaches to satisfying requirement goals. The Concessionaire will provide the Authority with the details and the implementation schedule for the proposed alternative approach for the Authority's review and approval. The overall effectiveness of the proposed alternative approach will not be less than that stated as a performance requirement. The Authority will not unreasonably withhold approval of the proposed alternative approach. Ancillary requirements and associated OLDs will have to be redefined. As an example, in the Water Supply section, the Concessionaire may propose to perform a leak survey of the entire distribution system initially to enjoy economies of scale and to identify and repair larger leaks sooner to reduce production costs.

The Authority and the Concessionaire will mutually develop the associated repair and OLDs aspects of any approved alternative approach.



**13.0 Annual Exceedance Credit**

For performance standards with an annual performance requirement, if the Concessionaire's performance during any year exceeds the annual requirement, that exceedance of the annual requirement may be credited towards satisfying the annual requirement during the following year.

**14.0 Transition Period**

The period beginning with the date of Closing and ending six (6) months later shall, herein be referred to as the Transition Period. The Concessionaire will submit for the Authority review and approval (which approval shall not be unreasonably withheld or delayed) all SOPs and reporting forms as required in the Operating Standards. The proposed drafts should be submitted within 120 days of Closing to allow time for review by the Authority and subsequent modifications as might be necessary. The Concessionaire should give consideration to satisfying several reporting obligations by combining necessary information into a singular report. All relevant issues, including use of software for report generation and submission, should be addressed and finalized within this period.

During the Transition Period, the performance requirements for all Operating Standards with an annual requirement will not be in force.

During the first full year following the end of the Transition Period, the performance requirements for all Operating Standards with an annual requirement will be reduced to fifty percent (50%) of the performance requirements. The OLDs stated in the Operating Standards remain in effect.

Beginning with the second full year following the end of the Transition Period, and thereafter, all conditions, requirements, and OLDs in the Operating Standards will be in full effect.