



WATER QUALITY MANAGEMENT PERMIT

<p>A. PERMITTEE (Name and Address): CLIENT ID#: 87712 PA American Water Co. 852 Wesley Drive Mechanicsburg, PA 17055-4436</p>	<p>B. PROJECT/FACILITY (Name): Lock 57 WTP (Replacing Shady Lane Water Treatment Plant)</p>									
<p>C. LOCATION (Municipality, County): SITE ID#: 237989 East Vincent Township, Chester County</p>										
<p>D. This permit approves the construction and operation of industrial wastewater facilities consisting of: The proposed Lock 57 WTP will have a rated capacity of 6.6 mgd. The treatment process will include carbon contact, chemical pretreatment, rapid mixing, flocculation and sedimentation, rapid granular media filtration, UV disinfection, and post chemical treatment. Process residuals (settled solids and filter backwash wastewater) will be processed using lagoons. The proposed Lock 57 wastewater treatment system includes two membrane lined earthen lagoons for wastewater clarification and residual holding basins for filter backwash and rinse water. The filter backwash, rinse water and settling basin sludge blowdown will be directed to the lagoons. The supernatant decanted from the lagoons will be discharged through to the Schuylkill River in emergency conditions or recycled back to the head of the plant, while the settled and thickened sludge will be land applied or disposed. The recycled flow rate will be controlled via a flow control valve at the RWPS to limit the recycle rate to a maximum of 10%. The supernatant from the lagoons will only be recycled once the solids have been allowed to settle out into the lagoon sludge storage levels, so as to minimize any potential for concentration of contaminants.</p> <p>Each lagoon will have sufficient volume for backwash wastewater equalization, a two-foot deep settling zone, and one year of solid storage. Settled supernatant from the lagoons will be discharged to the existing NPDES discharge location or the new RWPS suction at a controlled rate for recycle to the head of the WTP. Lagoons will be operated one at a time. When one lagoon has reached its solid storage capacity (approx. one year), it will be taken off line and process wastewater will be discharged to the second lagoon.</p> <p>The backwash pumps include 2 (one duty and one standby) centrifugal pumps with a capacity of 10,750 gpm with a TDH of 40 ft. Each lagoon shall be approximately 250 in length and 125 in width with a settling zone depth of 2 ft. with a capacity to hold 2.8 M gallons filter WW.</p> <p>It is the opinion of the Department that the proposed wastewater treatment system meets the design standards of the Domestic Wastewater Facilities Manual.</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 25%;">Pumps: 2 Centrifugal</td> <td style="width: 25%;">Manure Storage:</td> <td style="width: 50%;">Industrial Wastewater Treatment Facility:</td> </tr> <tr> <td>Design Capacity: 10,750 GPM</td> <td>Volume: _____ MG</td> <td>Annual Average Flow: 0.07 MGD</td> </tr> <tr> <td></td> <td>Freeboard: _____ inches</td> <td>Design Hydraulic Capacity: _____ MGD</td> </tr> </table>		Pumps: 2 Centrifugal	Manure Storage:	Industrial Wastewater Treatment Facility:	Design Capacity: 10,750 GPM	Volume: _____ MG	Annual Average Flow: 0.07 MGD		Freeboard: _____ inches	Design Hydraulic Capacity: _____ MGD
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<p>E. APPROVAL GRANTED BY THIS PERMIT IS SUBJECT TO THE FOLLOWING:</p> <ol style="list-style-type: none"> New Permits: All construction, operations and procedures shall be in accordance with the Water Quality Management Permit application dated December 122, 202, its supporting documentation. Permit Conditions Relating to Industrial Wastewater are attached and made part of this permit. 										
<p>F. THE AUTHORITY GRANTED BY THIS PERMIT IS SUBJECT TO THE FOLLOWING FURTHER QUALIFICATIONS:</p> <ol style="list-style-type: none"> If there is a conflict between the application or its supporting documents and amendments and the attached conditions, the attached conditions shall apply. Failure to comply with the rules and regulations of DEP or with the terms or conditions of this permit shall void the authority given to the permittee by the issuance of this permit. This permit is issued pursuant to the Clean Streams Law Act of June 22, 1937, P.L. 1987, as amended 35 P.S. §691.1 et seq. Issuance of this permit shall not relieve the permittee of any responsibility under any other law. 										
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COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF POINT AND NON-POINT SOURCE MANAGEMENT

PERMIT CONDITIONS RELATING TO INDUSTRIAL WASTEWATER
For use in Water Quality Management Permits

(Check boxes that apply)

General

- 1. The Department of Environmental Protection (DEP) considers the licensed Professional Engineer whose seal is affixed to the design documents to be fully responsible for the adequacy of all aspects of the facility design.
- 2. All relevant and non-superseded conditions of any prior Water Quality Management Permits, decrees or orders issued to the permittee or his predecessor shall be continued in full force and effect and together with the provisions of this permit shall apply to his successors, lessees, heirs and assigns.
- 3. The responsibility for implementing the conditions of this permit shall rest upon the owner, lessee, assignee or other party in responsible managerial charge of the operation producing the wastewaters and waste treatment facilities. Transfer of a permit to a new owner shall not be effective until said transfer has been executed and filed on forms provided by DEP and DEP approved the transfer.
- 4. The permittee shall secure any necessary permission from the proper federal authority for any outfall or industrial waste treatment structure which discharges into or enters navigable waters and shall obtain a separate permit for any stream crossing, encroachment or change of natural stream conditions within the jurisdiction of DEP.
- 5. When construction of the approved facilities is completed and before they are placed in operation, the permittee shall notify DEP in writing so that a DEP representative may inspect the facilities.
- 6. The approval of the plans, and the authority granted in this permit, if not specifically extended, shall cease and be null and void 5 years from the issuance date of this permit unless construction or modification of the facilities covered by this permit has begun on or before the fifth anniversary of the permit date.
- 7. The authority granted by this permit is subject to all effluent requirements, monitoring requirements and other conditions as set forth in the NPDES Permit and all subsequent amendments and renewals. No discharge is authorized from these facilities unless approved by an NPDES Permit.
- 8. Nothing herein shall be construed to be an intent on the part of DEP to approve any present or future act by the permittee, inconsistent with the permittee's lawful powers or with existing laws of this Commonwealth regulating industrial wastes and the practice of professional engineering. This permit shall not be construed to sanction any act otherwise forbidden by any of the laws of the Commonwealth of Pennsylvania or of the United States.

Construction

- 9. This permit is issued under the authorization of The Clean Streams Law and 25 Pa. Code Chapter 91. The permittee shall obtain all necessary permits, approvals and/or registrations under 25 Pa. Code Chapters 102, 105 and 106 prior to commencing construction of the facilities authorized by this permit, as applicable. The permittee should contact the DEP office that issued this permit if there are any questions concerning the applicability of additional permits.
- 10. The facilities shall be constructed under expert engineering supervision and competent inspection, in accordance with plans, designs and other data as herein approved or amended and with the conditions of this permit.
- 11. A Pennsylvania licensed Professional Engineer shall certify that construction of the permitted facilities was completed in accordance with the application and design plans submitted to DEP, using the "Post Construction Certification" form (3800-PM-WSFR0179a). It is the permittee's responsibility to ensure that a Professional Engineer is on-site to provide the necessary oversight and/or inspections to certify the facilities. The certification must be submitted to DEP before the facility is placed in operation. As-built drawings, photographs (if available) and a description of all deviations from the application and design plans must be submitted to DEP within 30 days of certification.

- 12. The DEP office that issued this permit must be contacted during construction if significant changes are proposed to the approved facilities. Significant changes include, but are not limited to changes to the type(s) of process(es) used for treatment and changes to the design capacities of tanks, impoundments, and conveyance structures or equipment by more than 5% of the original design. For projects involving PENNVEST funding, all changes should be discussed with the DEP project manager prior to implementation. DEP may require the submission of an application to amend this permit. All changes shall be documented in an attachment to the Post Construction Certification form.
- 13. The local Waterways Conservation Officer of the Pennsylvania Fish and Boat Commission (PFBC) shall be notified when the construction of any stream crossing and/or outfall is started and completed. A written permit must be secured from the PFBC if the use of explosives in any waterways is required and the local Waterways Conservation Officer must be notified when explosives are to be used.

Operation and Maintenance

- 14. If at any time the industrial waste treatment facility, or the discharge of the effluent creates a public nuisance, or such discharge is causing or contributing to pollution of the waters of this Commonwealth, the permittee shall immediately adopt remedial measures acceptable to DEP.
- 15. The permittee shall maintain records of "as-built" plans showing all the treatment facilities as actually constructed together with facility operation and maintenance (O&M) manuals and any other relevant information that may be required. Upon request, the "as-built" plans and O&M manuals shall be filed with DEP.
- 16. To ensure operational efficiency and protect the waters of this Commonwealth, the permittee shall maintain skilled operators at all times.
- 17. No stormwater, sewage or other industrial wastes not specifically approved herein shall be admitted to the facilities for which this permit is issued.
- 18. These industrial waste treatment facilities shall be operated and maintained to perform as designed. In order to ensure the efficiency and proper maintenance of the treatment facilities, the permittee shall make periodic inspections to detect any impairment of structural stability, adequate capacity or other requisites which might impair the effectiveness of the approved facilities.
- 19. Collected screenings, slurries, sludge and other solids shall be handled and disposed of in compliance with Title 25 Pa. Code Chapters 287, 288, 291, 297 and 299 (related to permits and requirements for land filling, land application, incineration and storage of industrial sludge), Federal Regulations 40 CFR 257 and the Federal Clean Water Act and its amendments.



**WATER QUALITY MANAGEMENT
 POST CONSTRUCTION CERTIFICATION**

PERMITTEE IDENTIFIER

Permittee	PA American Water Co.
Municipality	East Vincent Township
County	Chester
WQM Permit No.	<u>1522201</u>
Facility Type	Industrial Waste

All of the above information should be taken directly from the Water Quality Management Permit.

CERTIFICATION

This certification must be completed and returned to the permits section of the DEP's regional office issuing the WQM permit within 30 days of completion of the project and received by DEP prior to operation, and if requested, as-built drawings, photographs (if available) and a discussion of any DEP-approved deviations from the design plans during construction.

I, being a Registered Professional Engineer in Pennsylvania, do hereby certify to the best of my knowledge and belief, based upon personal observation and interviews, that the above facility approved under the Water Quality Management Permit has been constructed in accordance with the plans, specifications and modifications approved by DEP.

Construction Completion Date (MM/DD/YYYY): _____

	Professional Engineer
	Name _____ (Please Print or Type)
	Signature _____
	Date _____
	License Expiration Date _____
	Firm or Agency _____
	Telephone _____
	Permittee or Authorized Representative
	Name _____ (Please Print or Type)
	Signature _____
	Title _____
	Telephone _____