



WATER QUALITY MANAGEMENT PERMIT

<p>A. PERMITTEE (Name and Address): Keystone-Conemaugh Projects, LLC 175 Cornell Road, Suite 1 Blairsville, PA 15717-8076</p>	<p>CLIENT ID#: 350861</p>	<p>B. PROJECT/FACILITY (Name): Keystone Generating Station</p>
<p>C. LOCATION (Municipality, County): 313 Keystone Drive, Shelocta, PA 15774 Plumcreek Township, Armstrong County</p>		<p>SITE ID#: 243270</p>
<p>D. This permit amendment approves the modification and operation of industrial wastewater facilities consisting of: This permit amendment allows for (1) the action rate that applies to the leachate detection zones in Ash Filter Ponds A, B, and C to be modified from 100 gallons/acre/day to 1,000 gallons/acre/day and (2) the modification of the maximum water levels in Ash Filter Ponds A, B, and C to reflect the water surface elevations presented on the design drawings submitted with the application for the previously approved WQM Permit amendment (1022.5 ft., 1024.0 ft., and 1024.9 ft. respectively).</p>		
		<p>Industrial Wastewater Treatment Facility:</p> <p>Annual Average Flow: <u>4.87</u> MGD</p> <p>Design Hydraulic Capacity: <u>27.65</u> MGD</p> <p>Design Organic Capacity: _____ lb/day</p>
<p>E. APPROVAL GRANTED BY THIS PERMIT IS SUBJECT TO THE FOLLOWING:</p> <ol style="list-style-type: none"> 1. Amendments: All construction, operations and procedures shall be in accordance with the Water Quality Management Permit Amendment application dated <u>11/13/2020</u> and its supporting documentation and addendums dated <u>11/18/2020</u>, which are hereby made a part of this amendment. Except for any herein approved modifications, all terms, conditions, supporting documentation and addendums approved under Water Quality Management Permit No. <u>0386201</u> dated <u>7/22/1986</u> and <u>0386201 A-1</u> dated <u>3/9/2017</u> shall remain in effect. 2. Permit Conditions Relating to Industrial Wastewater are attached and made part of this permit. 3. Special Conditions numbered <u>1-5</u> 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"> 1. If there is a conflict between the application or its supporting documents and amendments and the attached conditions, the attached conditions shall apply. 2. Failure to comply with the rules and regulations of DEP or with the terms or conditions of this permit shall void the authority given to the permittee by the issuance of this permit. 3. This permit is issued pursuant to the Clean Streams Law Act of June 22, 1937, P.L. 1987, as amended 35 P.S. §691.1 et seq. Issuance of this permit shall not relieve the permittee of any responsibility under any other law. 		
<p>PERMIT ISSUED:</p> <p><u>May 14, 2021</u></p>	<p>BY: <u>John A. Holden</u> John A. Holden, P.E. Clean Water Program Manager Northwest Regional Office</p>	<p>TITLE:</p>



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.



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

SPECIAL CONDITIONS

Water Quality Management Permit No. 0386201 A-2 T-4

Keystone Generating Station

1. A Form 14R – Residual Waste Landfill and Disposal Impoundment Quarterly and Annual Water Quality Analyses Report must be submitted to the Department relative to the quarterly parameters on a calendar quarterly basis starting on the first calendar quarter after permit issuance and inorganic annual parameters on an annual basis starting on the anniversary date of this permit modification for the following groundwater monitoring points:

<u>WELL NO.</u>	<u>GRADIENT POSITION</u>	<u>LATITUDE</u>	<u>LONGITUDE</u>
MW-5	Upgradient	40° 39' 40.3"	79° 20' 34.6"
MW-6	Downgradient	40° 39' 37.6"	79° 20' 38.1"
MW-29	Downgradient	40° 39' 38.5"	79° 20' 39.3"
MW-30	Downgradient	40° 39' 36.7"	79° 20' 37.0"

2. This permit approves, pursuant to 25 Pa. Code Section 287.231, the following requests for equivalency review:
 - i. Use of enhanced geosynthetic clay liner in the Ash Filter Pond liner system as described in Appendix B to Form V of the approved application. The material shall be placed on a prepared subgrade that is free of debris, rock fragments, plant materials and other deleterious foreign material; that is proof-rolled to create a hard, smooth and uniform surface compacted to 95% Standard Proctor Density determined by ASTM 698 and verified in accordance with the procedures identified in Section 2 of the Construction Quality Assurance/Quality Control Plan contained in Appendix I to Form V of the approved application.
 - ii. Use of geocomposite drainage material for the leachate detection zone in the Ash Filter Pond liner system as described in Appendix D to Form V of the approved application. The geocomposite drainage material authorized for placement for this purpose shall possess minimum transmissivity of 6.3×10^{-4} m²/sec at a hydraulic gradient of 0.005 and 620 psf normal stress, and shall otherwise conform to the Construction Quality Assurance/Quality Control Plan contained in Appendix I to Form V of the approved application.
 - iii. Use of fabric-formed, grout-filled revetment for the protective cover in the Ash Filter Pond liner system as described in Appendix F to Form V of the approved application. The revetment material authorized for placement for this purpose shall possess a 28-day compressive strength of 3,000 psi and shall otherwise conform to the Construction Quality Assurance/Quality Control Plan contained in Appendix I to Form V of the approved application.
3. The liner system for the new Ash Filter Ponds shall be constructed in accordance with the Technical Specifications and Construction Quality Assurance/Quality Control Plan respectively presented in Appendices H and I to Form V of the approved application. The following geosynthetic liner materials are authorized to be used in the system:

Material	Manufacturer	Product
HDPE Geomembrane:	GSE Environmental Agru-America Poly-Flex, Inc. Solmax International	HDT 60-mil Microspike 60-mil Textured 60-mil 460T-1000
Geosynthetic Clay Liner:	CETCO	Resistex DN
Nonwoven Geotextile:	GSE Environmental Hanes Geo Components SKAPS Industries Thrace-LINQ	NW16 Terra Tex N16E Mirafi 160N 1600 EX
Geocomposite Drainage Material:*	GSE Environmental SKAPS Industries	Fabrinet 275 Transnet TN 270
Protective Cover	Donnelly Fabricators	TEXICON

*Double-sided, 10-ounce per square yard geotextile on top and 6-ounce per square yard geotextile on bottom

Authorization to utilize geosynthetic materials not specifically listed above requires, not less than thirty (30) days prior to the initiation of liner system construction activities, that documentation be submitted to the Department demonstrating that the specific materials to be deployed satisfy the material specifications listed in the approved Construction Quality Assurance/Quality Control Plan.

4. The leachate detection zone of each Ash Filter Pond shall be monitored at least once during a calendar week to determine whether liquid is flowing within the detection zones as required by 25 Pa. Code Section 289.435(c). If liquid is detected to be flowing from the detection zones, the permittee shall implement the provisions of 25 Pa. Code Section 289.435(d). Detection zone flow rate and chemical analyses shall be incorporated into the quarterly report package. The permittee shall estimate on a weekly basis the volume of liquid flowing from the zone per detection zone monitoring point. If the liquid in the leachate detection zone exceeds 1,000 gallons per acre per day, the permittee shall immediately notify the Department's SWRO Waste Management Program by telephone or e-mail and provide follow-up in writing. The permittee shall also submit to the Department within 30 days of verbal notification for review and approval, (a) a plan to locate and remediate the source of the flow as set forth in 25 Pa. Code Section 289.435(e)(1) or, if the source has been located, (b) a report of the cause, source and remediation performed along with a remedial plan to prevent reoccurrence. If a determination as to the source cannot be resolved within the original 30-day period, then the permittee shall implement 25 Pa. Code Section 289.435(e)(2) and 289.435(e)(3).
5. The Ash Filter Ponds shall be operated to maintain a freeboard of not less than 2 vertical feet at all times. The outlet riser in each Ash Filter Pond shall be constructed in accordance with Detail 1 on Drawing No. 781-2010 and with the adjustable weir plates set to ensure that the maximum water level does not exceed 1022.5' in Pond A, 1024.0' in Pond B, and 1024.9' in Pond C in accordance with Drawing Nos. 781-2006 and 781-2007.