



# **VPDES Permit Reissuance Appalachian Power Company Clinch River Plant**

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# Presentation Overview

- Background
- Public Participation
- Major Areas of Concern
- DEQ Response
- Proposed Permit Modifications

# APCO – Clinch River Plant

- Groundbreaking May 1956 .... Dedicated in 1958
- Originally fueled by coal...Conversion to natural gas began in 2015
- Coal usage ceased on September 2, 2015
- Application for reissuance received March 13, 2015, The application addressed:
  - the changes in the operation with respect to the conversion to gas
  - wastewater from dewatering activities to facilitate the closure of the remaining coal ash pond at the facility.

# Clinch River Plant Site



# Existing VPDES Permit

Existing VPDES Permit addresses:

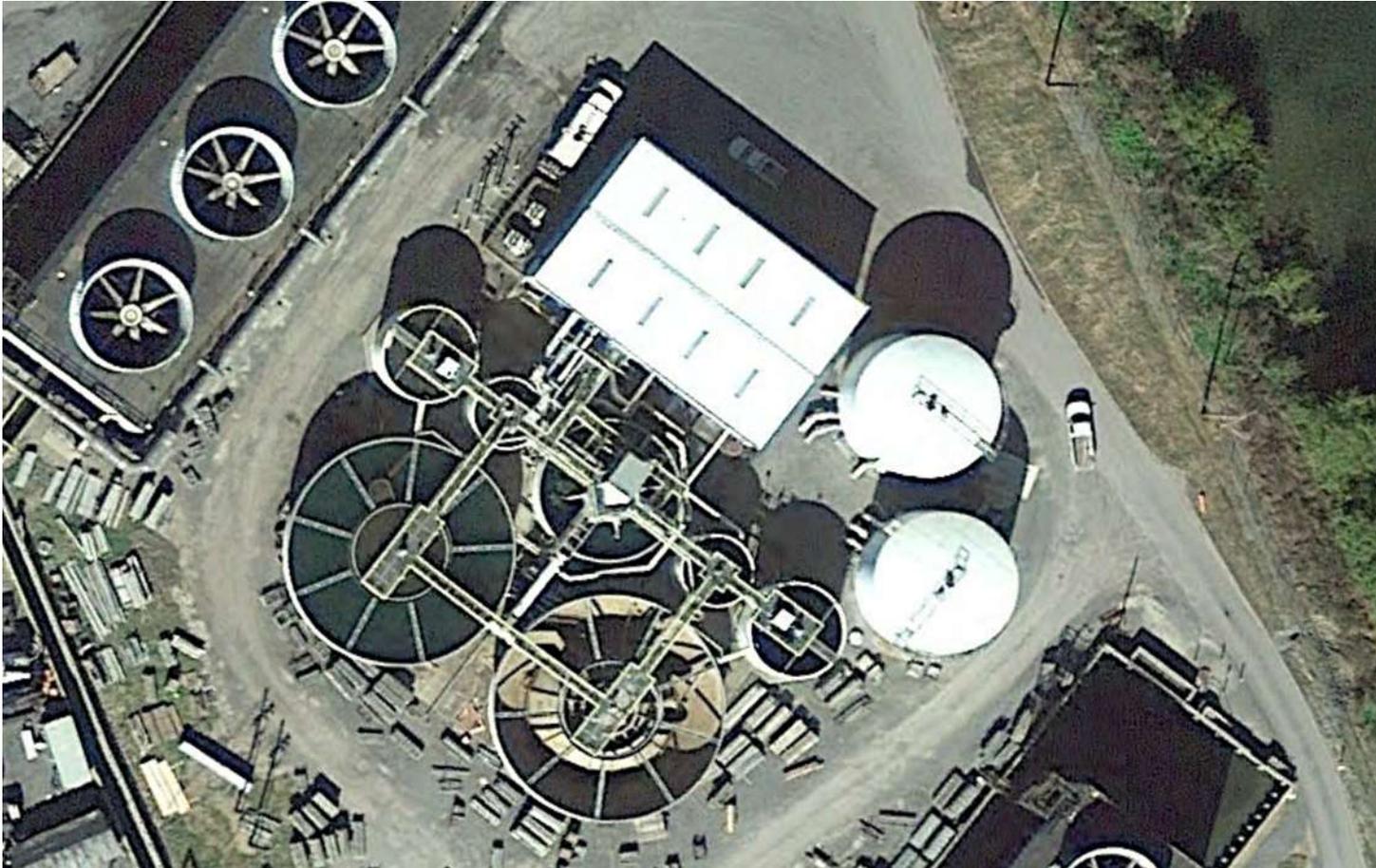
- Boiler “Blow-down”
- Cooling Tower “Blow-down”
- Coal Pile Runoff
- Sanitary Wastewater
- Storm Water Runoff
- **Landfill Leachate**
- **Ash Pond Discharge**

Copper has historically been the primary “pollutant of concern”

# Wastewater Treatment (AWWTP)

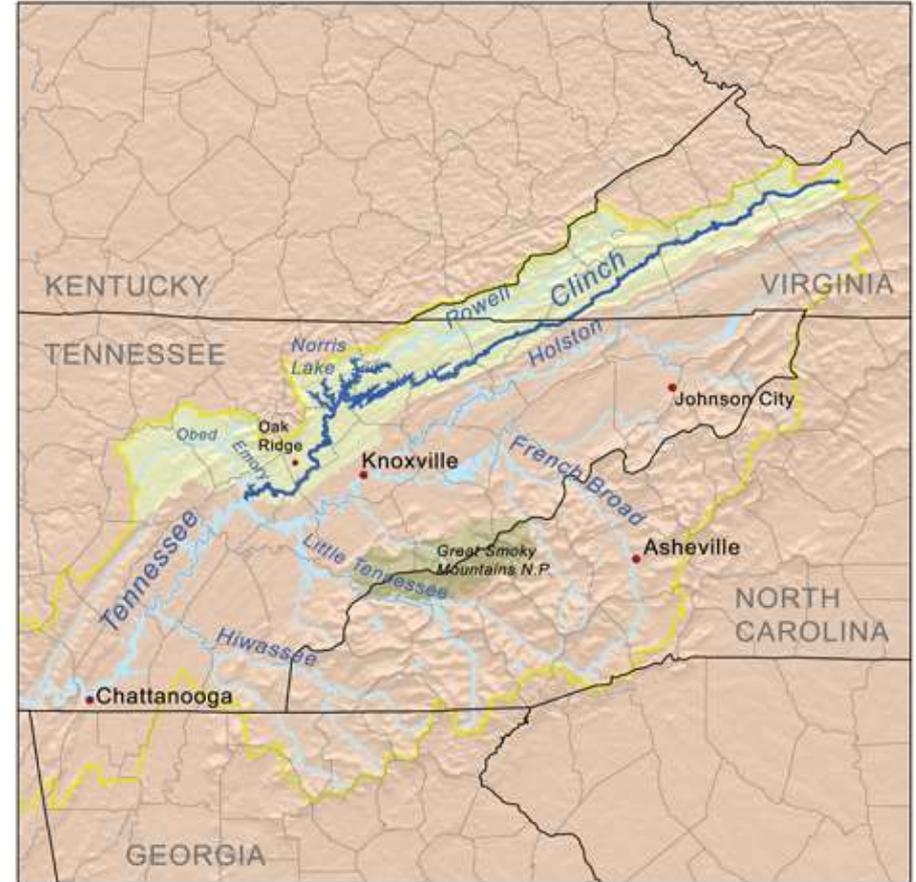
- Advanced Waste Water Treatment Plant built in 1993
- Design capacity of 7.8 MGD
- Designed to remove metals (Copper)
- 23+ year history of compliance

# AWWTP



# Clinch River

- Recreational Uses
- 4 Public Water Supplies
- 1 T&E Listed Fish
- 14 T&E Listed Mussels
- “Critical Habitat” for 6 Species



# Ash Pond Closure

- Separate DEQ permit action under solid waste regulations.
- “Closure in Place”
  - Regrade Surface
  - Cover with impermeable PVC Liner
  - Install soil layer
  - Plant vegetative cover
  - Manage storm water
- Requires removal of 2.7 MG of water



# Ash Pond 1A/1B



# Proposed Draft Permit

- Proposed Changes from Existing Permit Address:
  - Near term changes at the facility associated with Pond Closure
  - Long term changes associated with the conversion to gas
  - New Regulatory Changes associated with CWIS
- Most Significant Changes Address:
  - Ash Pond Dewatering
  - Cooling Water Intake Structure Requirements

# Ash Pond Dewatering

- Permit approach similar to Bremo and Possum Point
  - De-Watering Tier of Restrictive Effluent Limits
  - Increased Monitoring Frequency
  - Prompt Reporting of Results
  - Cease De-watering Requirement
  - Maximum De-Watering Flow Rate of 0.36 MGD

# 316(b) Requirements

- 2014 EPA rulemaking established additional VPDES requirements for “cooling water intake structures”
- Established national standard of “best technology available” ( i.e. BTA)
- Proposed permit includes requirements to gather information for the next permit cycle

# Public Participation

- Notice of the Draft Permit and Public Hearing was published in *the Bristol Herald Courier* and in the *Lebanon News*
- The public hearing was held on May 4, 2016.
- 31 people attended the public hearing.
- Board Member Lou Ann Jessee-Wallace served as the hearing officer.
- The 45 day public comment period ended on May 19, 2016.
- Approximately 200 people provided written comments.

# Summary of Comments

- Implementation of Permit Limitations
  - Technology based Limits vs. WQ based Limits
- Objections to procedures used to Develop Limits
  - Use of Mixing Zones
  - Compliance with Anti-Degradation Policy
- Protection of Endangered Species
- Protection of Public Water Supplies
- Compliance Monitoring Recommendations
- Comments regarding 316(b) info requirements

# Major Areas of Concern

## Technology-Based Effluent Limits

### Comment

- DEQ should develop site specific technology based limitations based on BAT and on the facility's demonstrated ability to treat.
- Clean Water Act requires technology-based limits be developed on a case-by-case basis

### Response

- Federal rule-making for this industry was updated and published in November 2015
  - Legacy wastewaters were addressed in this rule
  - Concluded federal technology-based limits are appropriate
- Revised permit maintains technology-based limits as required by Federal Effluent Guidelines
- EPA reviewed the draft permit and had no objections.

# Major Areas of Concern

## Methodology for Limitation Development

### Comment

- Effluent Limits are Not Protective
- Mixing Zone not protective of Threatened & Endangered Species
- Mixing Zones allows standards to be exceeded
- Mixing Zone Conflicts with Anti-degradation Policy

### Response

- Mixing zones authorized by SWCB Regulation
- Proposed effluent limits are protective of Water Quality Standards supporting all beneficial uses including T&E species
- Extremely conservative assumptions applied
- More stringent limits were included based on a “regulatory mixing zone” (350 feet x 35 feet .... ~ 0.28 acres)
- No degradation is anticipated

# Major Areas of Concern

## T&E Species Protection

### Comment

- Requests for additional protections for T&E species

### Response

- DEQ Assigned a Regulatory Mixing Zone for all phases of operation
  - Reduced the Copper Limit
  - Reduced the Ammonia Limit
  - Established a monitoring program for Selenium

# Major Areas of Concern

## Water Supply Protection

### Comment

- Comments expressed concern about potential impact to downstream water supplies

### Response

- DEQ coordinated a review with VDH Office of Drinking Water
- VDH review of permit and application identified no specific issues
- DEQ added a requirement that APCO notify Town of St. Paul Water Plant prior to initiation of discharge

# Major Areas of Concern

## Compliance Monitoring

### Comment

- Requests for Lower Quantification Levels to parallel other Coal Ash dewatering permits
- Requests for increased monitoring for several pollutants
- Request for Whole Effluent Toxicity tests with be done with mussel species

### Response

- Increased WET testing frequency
- Increased monitoring for several metals
- Lowered quantification levels

# Major Areas of Concern

## 316(b) Related Comments

### Comment

- Requests that DEQ adopt the USFWS recommendations for Intake Monitoring

### Response

- DEQ has expanded the information requirements to parallel the USFWS requests.

# Proposed Changes in the Revised Permit

- Reduction of the effluent limitation for Copper
- Reduction of the effluent limitation for Ammonia
- Addition of a monitoring requirement for Selenium
- Changes in quantification levels
- Increase frequency of testing for several potential pollutants
- Additional 316(b) information requirements

## Additional Proposed Change

Part I.E.3

from:

- *The permittee shall, by no later than 180 days prior to the expiration date of this permit, submit to the DEQ Regional Office all applicable information described in 40CFR §§122.21(r)(2) through (r)(9).*

to:

- *The permittee shall, by no later than 180 days prior to the expiration date of this permit, submit to the DEQ Southwest Regional Office all applicable information described in 40 CFR §§122.21(r)(2) through (r)(8). In addition, the submission shall include information described in 40 CFR §122.21(r)(9).*



***QUESTIONS?***

# Staff Recommendation

The DEQ Staff has prepared the VPDES discharge permit for APCO – Clinch River Plant (VA0001015) in accordance with all applicable statutes, regulations and agency practices; the effluent limits and conditions in the permit have been established to protect instream beneficial uses and fish and wildlife resources and to maintain all applicable water quality standards; and all public comments relevant to the permit have been considered. Therefore, based on the agency permit files, the comments received during the public comment period and any explanation of comments previously received during the public comment period made at the Board meeting, the staff recommends the Board:

# Staff Recommendation

1. Find that:
  - a. The permit has been prepared in conformance with all applicable statutes, regulations, and agency practices;
  - b. The effluent limits and conditions in the permit have been established to protect instream beneficial uses and fish and wildlife resources; and
  - c. All public comments relevant to the permit have been considered.
2. Approve the permit and conditions as presented today.
3. Authorize the Director to issue the permit as approved by the Board.