

SUBJECT: Title V Operating Permit Significant Modification
Keystone - Conemaugh Projects, LLC
Keystone Steam Electric Station
Plum Creek Township, Armstrong County
TVOP 03-00027

TO: Eric Gustafson
Air Quality Program Manager
Northwest Regional Office

THROUGH: Matthew Williams
Facilities Permitting Chief
Air Quality Program -Northwest Regional Office

Incorporation of the relevant EPA's FIP conditions included in 40 CFR part 52 Section 52.2065 into
Keystone's TV permit and the PA State Implementation Plan (SIP)

DEP issued Keystone Generating Station's most recent case by case RACT II Permit on May 12th of 2022. The case by case RACT II conditions of this permit, 1-5, 7, and 13-17 from section E group G09 related to RACT II case by case conditions for Keystone's two main boilers (source IDs 031 and 032) and conditions 1-3, 5-7 from section E group G11 related to RACT II case by case conditions for the two auxiliary boilers (source IDs 037 and 038), were then submitted to EPA as a SIP revision on May 26th of 2022. This SIP action is currently pending EPA approval. EPA proposed a federal implementation plan (FIP) on May 25th of 2022. The FIP was subsequently finalized on August 31st of 2022 and included the conditions summarized below.

- Keystone Generating Station's Units 1 and 2 shall achieve and maintain a 30-Day Rolling Average NOx Emission Rate to not exceed .075 lb NOx/MMBtu. Units 1 and 2 may average between themselves to achieve this limit.
- Keystone Generating Station's Units 1 and 2 shall achieve and maintain their Unit-specific Daily NOx Mass Emissions to not exceed 15,691 lb NOx/day.
- In determining the 30-Day Rolling Average NOx Emission Rate for Units 1 and 2, Keystone Generating Station shall use CEMS in accordance with the procedures of 40 CFR parts 60 and 75, appendix F, Procedure 1.
- For purposes of calculating the Unit-specific Daily NOx Mass Emissions Limits, Keystone Generating Station shall use CEMS in accordance with the procedures at 40 CFR part 75.
- Recordkeeping and periodic reporting. (1) The Facility shall electronically submit to EPA a periodic report, within thirty (30) Days after the end of each six-month reporting period (January through June, July through December in each calendar year).
- The report shall include but not be limited to: Facility ID (ORISPL); Facility name; Unit ID; Date; Unit specific total Daily Operating Time (hours); Unit-specific Daily NOx Mass Emissions (lbs); Unit-specific total Daily Heat Input (MMBtu); Unit-specific Daily NOx Emission Rate (lb/MMBtu); Facility-wide 30-Day Rolling Average NOx Emission Rate (lb/MMBtu); Owner; Operator;

Representative (Primary); and Representative (Secondary). In addition, the Facility shall maintain the following information for 5 years from the date of creation of the data and make such information available to EPA if requested: Unit-specific hourly heat input, Unit-specific hourly ammonia injection amounts, and Unit-specific hourly NOX emission rate.

Given that the FIP case-specific emission limits for Keystone Generating Station have already been approved by the EPA as satisfying the 1997 and 2008 ozone NAAQS, they are more stringent than the presumptive RACT limits the Department initially promulgated for tangentially fired coal boilers of this size under 25 Pa. Code § 129.97(g)(1)(viii), they are roughly equivalent in stringency to the Department's prior case-by-case RACT II determination specifically for these sources, and the analysis conducted under 25 Pa. Code §129.92(b) supports the conclusion that SCR Optimization constitutes RACT for the utility boilers, I recommend accepting EPA's proposal that the 0.075 lb/MMBtu (30-day rolling avg) and the unit specific 15,691 lb/day, NOx emission limits representing SCR Optimization that were promulgated under 40 CFR § 52.2065 also satisfy the RACT II requirements of 25 Pa. Code §§ 129.96 – 129.100. Based on the EPA analysis and Keystone Conemaugh Project LLC's comments on this analysis, the Department concludes that these emission limits are as stringent as or more stringent and represent RACT as determined by the Department when accounting for year-round operating conditions. The Department believes that the conditions in EPA's FIP, as summarized above, may help to adequately optimize the SCR's operation and therefore should be included in Section E – 'Source Group G12' of the proposed revised TVOP 03-00027 as well as incorporated into the commonwealth SIP.

In addition, the Department proposes to resubmit conditions 1-3, 5-7 from section E group G11 related to the facilities two auxiliary boilers to EPA for inclusion in the commonwealth SIP.

Best Available Retrofit Technology – Regional Haze

Section 51.308(f)(2) of the Regional Haze Rule requires State Implementation Plans to include the "enforceable emissions limitations, compliance schedules, and other measures that are necessary to make reasonable progress as determined pursuant to [51.308](f)(2)(i) through (iv)." To satisfy four-factor analysis requirements related to the second implementation period for Regional Haze, <insert facility name> is making the shutdown date of Source ID 031 (Boiler 1) and Source ID 032 (Boiler 2) to occur on or before December 31, 2028, and be federally enforceable and permanent."

The language that is being added to the permit is specific to the Second Implementation Period for Regional Haze aka Four-Factor Analyses.

Administrative Amendment

The facility submitted an administrative amendment application on June 6, 2022 which requested a change of the responsible official to John T. Kosinski. The responsible official was updated as part of the current permit action. **The administrative amendment application also provided the updated Acid Rain Permit which will be attached to the final issued permit.**

I recommend the proposed revised TVOP 03-00027 including the following case-by-case requirements for the utility boilers at Keystone Steam Electric Station located in Plum Creek Township, Armstrong County, be sent to the EPA, the permittee, and published in the PA Bulletin and a local newspaper in Armstrong County in order to solicit further comments. Once comments are received, DEP will modify

the permit conditions as appropriate and then submit them to EPA for inclusion in the commonwealth SIP.

cc: File: Keystone LLC, Permits, TVOP, 03-00027
Central Office – AQ Permits
EPA – Region III