



Via Electronic Mail

March 11, 2015

Michelle Tate, Executive Director
DEP Citizens Advisory Council
Rachel Carson Office Building
PO Box 8459
Harrisburg, PA 17105-8459
mtate@pa.gov
717-787-4527

RE: Outstanding Issues with “Additional RACT Requirements for Major Sources of NOX and VOCs.”

Dear Ms. Tate:

The Sierra Club, on behalf of its 24,000 members in Pennsylvania, respectfully submits the following comments on “Additional RACT Requirements for Major Sources of NOX and VOCs.” According to the March DEP report to the CAC at page 9, the Council will be asked to recommend approval of the draft final-form rule by the EQB at the Council’s March 17th meeting.

We request that you distribute these comments to the members of the Council in advance of this upcoming meeting.

Respectfully,

Thomas Schuster
Sr. Campaign Representative
Sierra Club
PO Box 51
Windber, PA 15963
(814) 467-2614 (office)
(575) 642-7156 (cell)
tom.schuster@sierraclub.org

Sierra Club Comments re: “Additional RACT Requirements for Major Sources of NOX and VOCs.”

When the Department of Environmental Protection initially released the draft rulemaking entitled “Additional RACT Requirements for Major Sources of NOX and VOCs (RACT II)” in April 2014, it was extremely lax and met with considerable public criticism, largely for its failure to achieve any reductions in NOx emissions from the largest source category in the state, coal-fired power plants. In fact, Region 3 of the Environmental Protection Agency, which ultimately must approve the rulemaking, took the unusual step of submitting critical comments during the public comment period rather than waiting to review the final form rule. In addition, four downwind states were among the many commenters criticizing the proposal as far too lax.

In response to these criticisms, DEP did make some positive revisions to the rule in November 2014. Most importantly, the revised rule required, for the first time, power plants with Selective Catalytic Reduction already installed to operate that equipment. However, the revised RACT II proposal still fails to satisfy RACT requirements and moreover fails to address three critical concerns EPA noted in its comments submitted during the 2014 public comment period. **Therefore, if the current version is submitted as is, EPA would have an obligation to reject it.** It would be preferable, and result in faster emissions reductions and health benefits, if DEP corrected the deficiencies before submitting the proposal to EPA. We have shared these concerns with Acting Secretary Quigley and staff in the Bureau of Air Quality and they are currently reviewing the analysis that we have provided.

Specifically, the primary problems with the proposal are as follows:

1. The proposal fails to set emission limits commensurate with what is and has been actually achieved by plants equipped with selective catalytic reduction (“SCR”) technology—even such plants already so equipped and operating in Pennsylvania ;
2. The proposal fails to consider cost efficacy thresholds within the range EPA identified; and,
3. The proposal fails to use an averaging period adequately protective of the short-term ozone standard.

In its comments, EPA directed DEP to review actual, historical NOx emission rates achieved by emitters equipped with control technology, in order to develop appropriate limits as RACT. However, the current proposal fails to do this, both by contemplating emission limits multiple times higher than what is achievable—and has been achieved—by controlled facilities in Pennsylvania, and by setting different limits for different facilities based on what controls they already have. RACT is a technology forcing requirement; it is not intended to simply codify rates attainable with existing controls at individual plants.¹ The current proposal is getting presumptive RACT backwards—rather than setting limits for a source category based on what is reasonably achievable for that source category, it sets limits for facilities within a source category based on whether or not they already have controls.

¹ See Memorandum from Roger Strelow, Assistant Administrator for Air and Waste Management, U.S. EPA, to Regional Administrators, Regions I - X (Dec. 9, 1976), at 2.

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And those limits are far higher than appropriate: as Sierra Club and others pointed out in our January 2014, June 2014, and November 2014 comments and correspondence, Pennsylvania coal-fired power plants have regularly demonstrated the ability to achieve NOx emission rates at or below 0.07 lbs/MMbtu—less than half what DEP currently proposes for SCR-equipped units, and a fifth of what DEP contemplates for uncontrolled units. The proposal is thus completely inconsistent with EPA’s admonition that RACT should be set with reference to the **lowest** historically achieved emission rates.²

Not only is the proposal thus incompatible with RACT, it also creates enormous problems of equity. Brunner Island is the only one of seven remaining large conventional coal-fired power plants in the state that has not installed SCR. The fact that the other six plants installed this control is testimony to the fact that SCR is “reasonably available.” Yet, by proposing a much more permissive emission limit for Brunner Island simply by virtue of its failure to install widely-used control technology, DEP would *reward* Brunner for lagging behind the rest of the industry. This is especially worrisome given that Brunner Island is the closest coal plant upwind of the 10-county southeastern region ozone non-attainment area.

Although DEP has not released a cost-efficacy analysis in the months since the new RACT proposal was revealed in November 2014, it is unlikely that SCR-based emission limits for Brunner Island would not be economically achievable pursuant to RACT. The Sierra Club has performed an analysis of costs of SCR at Brunner Island, using EPA’s methodology, including capital and O&M costs, NOx removal rates consistent with achieved SCR operation, and historical dispatch for Brunner Island; the results of these analyses are attached as Exhibit 1. According to these analyses, cost efficacy for NOx removal at Brunner would be approximately \$3500 per ton. Even if significantly lower dispatch and NOx removal consistent with DEP’s much less efficacious proposal (i.e., 0.15 lbs/MMbtu) are used, calculated cost efficacy remains well within the range that EPA discussed in its comments as being appropriate. Potential gas-firing at Brunner Island does not change this picture, as there do not appear to be any legal requirements that Brunner Island significantly constrain its coal-fired operation, and thus no guarantee of emissions reductions.

Concerning averaging periods, in its June comments EPA stated that it “recommends RACT emission standards for the ozone NAAQS to be based upon a short-term basis such as daily or 24-hour rolling average basis” because EPA no longer considers long-term limits to be “appropriate for current RACT.” Yet, the current proposal carries over the criticized 30-day rolling average periods despite EPA’s statements. DEP has indicated that, despite EPA’s comments, 30-day limits are included in its RACT proposal so as to allow for averaging of short startup and shutdown periods where it might be harder for facilities to achieve the significant reductions SCR affords. The 30-day limit proposed is already a very weak limit of 0.15 lbs/mmBTU for units with SCR installed, representing only a 60% NOx removal rate.³ However, the proposal also *specifically excludes* such startup and shutdown periods by only proposing to apply the weak limit when the input temperatures are above 600 degrees (i.e., normal

² See pages 3 and 4 of EPA comments dated 6/30/2014.

³ SCR is reliably capable of removing upwards of 90% of NOx.

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operation). When the units are operating at or near full capacity there is no reason they shouldn't be able to meet limits much closer to the manufacturer specifications.⁴ No evidence has been provided to dispute that a lower limit would be cost effective, and thus neither the EPA's comments nor the definition of RACT has been satisfied.

In summary, we respectfully ask that the Citizens Advisory Council postpone a recommendation to EQB on the current RACT II proposal, and instead recommend that DEP correct the deficiencies identified herein to ensure an approvable rule is forwarded to EPA Region 3.

Attachments:

Exhibit 1: Cost estimate for installation of SCR controls at Brunner Island

⁴ In our comments and our cost-effectiveness calculations, we have used a controlled NOx rate of 0.07 lbs/mmBTU. This provides adequate compliance cushion over the manufacturer specifications over longer averaging periods such as 30 days.