



GROUP AGAINST SMOG & POLLUTION

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August 1, 2016

VIA EMAIL

Allegheny County Health Department
Air Quality Program
301 39th St., Bldg. 7
Pittsburgh, PA 15201
aqpermits@alleghenycounty.us

**Re: Comments of Group Against Smog and Pollution, Regarding Draft
Title V Operating Permit for Cheswick Generating Station
(Permit # 0054r)**

Dear Sir or Madam:

Please accept these comments regarding the draft Title V Operating Permit (#0054r) for Cheswick Generating Station, which I am submitting on behalf of the Group Against Smog and Pollution. According to the notice posted on its website, the Allegheny County Health Department is accepting comments on the Permit through August 1, 2016.

Very truly yours,

/s

John K. Baillie
Staff Attorney

**COMMENTS OF THE GROUP AGAINST SMOG AND POLLUTION REGARDING
DRAFT TITLE V OPERATING PERMIT #0054r (the “PERMIT”) FOR THE
CHESWICK GENERATING STATION (the “PLANT”)**

The Permit is a renewal of a Title V Operating Permit which was issued in December 2010. It is notable that the Permit requires the Plant to reduce its emissions of a number of harmful air pollutants by significant quantities from levels that were permitted under the last Title V Operating Permit¹ and the Installation Permit that authorized the installation, and required the operation, of a flue gas desulfurization unit,² both of which were issued in 2010. All quantities are permitted emission limits, expressed in terms of tons per year (“TPY”):

| Pollutant | 2010 | 2016 |
|--------------------------|-------------|-------------|
| PM₁₀ | 788 | 554 |
| PM_{2.5} | 788 | 554 |
| NO_x | 10,840 | 5,641 |
| SO₂ | 33,726 | 13,911 |
| Hydrogen Chloride | 341 | 52 |
| Sulfuric Acid | 1,563 | 187 |
| Ammonia | 97 | 49 |

These emissions reductions should help improve public health greatly in the areas affected by the Plant’s emissions.

I. ACHD SHOULD DEFER ISSUING THE PERMIT UNTIL THE RACT ANALYSIS USED TO DETERMINE THE PLANT’S NO_x EMISSIONS LIMITS HAS BEEN SUBJECTED TO PUBLIC COMMENT AND APPROVED BY EPA

Pennsylvania is included in the Ozone Transport Region established by Section 184(a) of the Clean Air Act.³ Consequently, “all sources of volatile organic compounds [(“VOCs”)] ... covered by a control techniques guideline” in Pennsylvania are required to implement

¹ Title V Operating Permit for the Cheswick Power Station, # 0054, at § V.A.1.j (Dec. 30, 2010).

² Installation Permit for the Cheswick Power Station, # 0054-I004a, at § V.A.1.g (as amended April 20, 2010).

³ 42 U.S.C. § 7511c(a).

“reasonably available control technology” (“RACT”) for VOCs.⁴ Section 182(f) of the Clean Air Act applies the RACT requirement further, “to major stationary sources ... of oxides of nitrogen [(“NO_x”).”⁵

For sources in Allegheny County, RACT is “any pollution control equipment, process modifications, operating and maintenance standards, or other apparatus or techniques which may reduce emissions and which [ACHD] determines is available for use by the source ... in consideration of the necessity for obtaining the emission reductions, the social and economic impact of such reductions, and the availability of alternative means of providing for the attainment and maintenance of the NAAQS.”⁶ Because Pennsylvania is in the Ozone Transport Region, the measures that constitute RACT for any given source must be re-evaluated each time a NAAQS for ozone or one of its precursors (including NO_x) is promulgated or revised.⁷

The NO_x emissions limitations in the Permit are set at 0.10 lb/MMBtu while the Plant’s selective catalytic reducer (“SCR”) inlet temperature is operating at 600° F or above, and 0.35 lb/MMBtu when its SCR inlet temperature is below 600° F.⁸ According to the review memo that ACHD generated for the Permit, the NO_x emissions limitations “were derived from the newest RACT analysis performed by ACHD.”⁹

RACT determinations must be submitted to EPA as revisions to a State Implementation Plan (“SIP”).¹⁰ EPA can approve revisions to a SIP only after the public notice requirements set forth in 40 C.F.R. § 51.102 have been met.¹¹ Section 51.102 generally requires that the public be

⁴ 42 U.S.C. § 7511c(b)(1)(B).

⁵ 42 U.S.C. § 7511c(f).

⁶ Art. XXI, §2101.01.

⁷ *See National Resources Def. Council v. Environmental Prot. Agency*, 571 F.3d 1245, 1255 (D.C. Cir. 2009).

⁸ Permit, § V.A.1.d

⁹ ACHD, *NRG Cheswick TVOPr Technical Support Document* (June 29, 2016), at 3.

¹⁰ *See* 42 U.S.C. § 7511a(a)(2)(A) and (b)(2).

¹¹ *See* 40 C.F.R. § 51.104(c).

provided with notice, an opportunity to submit written comments, and an opportunity to request a public hearing regarding a proposed revision to a SIP.¹²

ACHD's recent RACT determination for the Plant has not been published, and the public has not been given an opportunity to comment or request a public hearing regarding it – ACHD has not met the requirements in 40 C.F.R. § 51.102(a). Although the RACT determination might very well be correct, it cannot be approved by EPA because it has not been published or subjected to public comments or a public hearing. It is premature to use an as-yet-unapproved revision to the SIP as the basis for an important emissions limitation in a Title V Operating Permit without having first satisfied the public notice requirements for SIP revisions and without having received final approval for such a revision; if the RACT determination is not approved, the Permit would need to be substantially revised and re-noticed for public comment. ACHD should defer issuing a final Permit until the procedural requirements for its RACT determination have been met and EPA has finally approved that determination.

II. THE PERMIT SHOULD CITE 40 C.F.R. § 51.1204 AS AUTHORITY FOR SECTION V.A.1.c

The Permit's limit for oxides of sulfur (expressed as sulfur dioxide ("SO₂")) is set at 3,176 lb/hour on a daily average basis, under the authority of Section 2103.12.a.2.F of Article XXI.¹³ Section 2103.12.a.2.F provides:

Emissions from the source will not prevent the attainment and maintenance of any ambient air quality standard established by Section 2101.10 of this Article at any location within the Commonwealth, nor will such emissions interfere with reasonable further progress toward the attainment of the NAAQS's; provided, however, that nothing herein contained shall preclude the applicant from agreeing to a more stringent emission limitation than established by this Article or securing enforceable emission reductions from existing sources so that such prevention or interference will not occur.¹⁴

¹² See 40 C.F.R. § 51.102(a).

¹³ Permit, § V.A.1.c.

¹⁴ Art. XXI, § 2103.12.a.2.F.

In 2010, EPA revised the primary NAAQS for SO₂, by establishing a 1-hour standard of 75 parts per billion; EPA determined that level was required to protect public health with an adequate margin of safety.¹⁵ Thus, ACHD purportedly set the Plant's SO₂ emissions limit at 3,176 lb/hour because that emissions rate would ensure attainment of the 1-hour SO₂ Standard in areas around the Plant. According to ACHD's review memo, the SO₂ emissions rate for the Plant that is required for nearby affected areas to attain the 1-hour SO₂ Standard was determined using air dispersion modeling:

SO₂ emissions were derived through air dispersion modeling results to comply with the 1-hour SO₂ NAAQS and a 21% reduction of that result to allow a 24-hour averaging period. Preliminary modeling shows that the maximum hourly SO₂ emission rate that would comply with the 1-hour SO₂ NAAQS for the years 2013-2015 is approximately 4,020 lbs/hr. Using information from the EPA Memorandum titled "Guidance for 1-Hour SO₂ Nonattainment Area SIP Submissions", dated April 23, 2015, the Department has selected a 24-hour averaging period and reduced the maximum hourly SO₂ emission rate from 4,020 lbs/hr to 3,176 lbs/hr.

The Permit is the only outstanding Title V Operating Permit issued by ACHD (and perhaps the only Title V Operating Permit ever issued by ACHD) that relies on Section 2103.12.a.2.F to set an emissions limit. However, Section 2103.12.a.2.F is not the only authority that empowers ACHD to establish an SO₂ emissions limit for the Plant at a level that will provide for attainment of the 1-hour SO₂ Standard based on air dispersion modeling. The SO₂ Data Requirements Rule¹⁶ also authorizes air agencies to establish SO₂ emissions limits for sources subject to the Rule at levels that will permit attainment of the 1-hour SO₂ Standard, based on air quality modeling:

At any time prior to January 13, 2017, the air agency may submit to the EPA federally enforceable SO₂ emissions limits (effective no later than January 13, 2017) for one or more applicable sources that provide for attainment of the 2010 SO₂ NAAQS in the area affected by such emissions. The submittal shall include associated air quality modeling and other analyses that demonstrate that all modeling receptors in the area will not violate the 2010 SO₂ NAAQS,

¹⁵ Primary National Ambient Air Quality Standard for Sulfur Dioxide; Final Rule, 75 Fed. Reg. 35520 (June 22, 2010).

¹⁶ The SO₂ Data Requirements Rule is codified at 40 C.F.R. §§ 51.1201 – 51.1205.

taking into account the updated allowable emission limits on applicable sources as well as emissions limits that may apply to any other sources in the area...¹⁷

Accordingly, section V.A.1.c of the Permit should cite 40 C.F.R. § 51.1204, as well as Section 2103.12.a.2.F of Article XXI, as authority.

III. SECTION V.A.1.u OF THE PERMIT SHOULD BE REVISED TO COMPLY WITH 40 C.F.R. § 51.1203(d)(3) AND SHOULD CITE 40 C.F.R. §§ 51.1203(d)(3) AND 51.1204 AS AUTHORITY

Section V.A.1.u of the Permit provides:

As required by the SO₂ Data Requirements Rule, the permittee shall perform an air dispersion modeling study in which the results of such study shall yield potential emissions limits sufficient to demonstrate compliance with the 2012 SO₂ NAAQS. These limits shall be included in an updated Major Source Permit by January 13, 2017.

First, if Section V.A.1.u is meant to refer to the 1-hour SO₂ Standard, it should be revised to read "...to demonstrate compliance with the 2010 SO₂ NAAQS" at the end of its first sentence. The 1-hour SO₂ Standard was established in 2010, while in 2012 EPA retained a secondary NAAQS for SO₂ that it first established in 1971.¹⁸ The SO₂ Data Requirements Rule is intended to help achieve attainment of the 1-hour SO₂ Standard.¹⁹

Second, Section V.A.1.u is partly inconsistent with the SO₂ Data Requirements Rule. The SO₂ Data Requirements Rule expressly requires that "the **air agency** shall conduct the modeling analysis"²⁰ if it chooses to use air dispersion modeling to characterize peak 1-hour concentrations of SO₂ in areas affected by emissions from a source that is subject to the Rule. Section V.A.1.u would violate the Rule by authorizing the Plant's operator to conduct air dispersion modeling that would be used to determine SO₂ emissions limits for the Plant. To comply with the SO₂ Data Requirements Rule, ACHD, the air agency with jurisdiction over the Plant, must conduct air dispersion modeling pursuant to the Rule. Section V.A.1.u must be revised accordingly.

¹⁷ 40 C.F.R. § 51.1204 (emphasis added).

¹⁸ See Secondary National Ambient Air Quality Standards for Oxides of Nitrogen and Sulfur; Final Rule, 77 Fed. Reg. 20218 (April 3, 2012).

¹⁹ See 40 C.F.R. § 51.1201.

²⁰ 40 C.F.R. § 51.1203(d)(3) (emphasis added).

Although Section V.A.1.u purports to be based on the SO₂ Data Requirements Rule, it does not cite that rule as authority, as the regulations governing Title V Operating Permit programs require.²¹ However, the Rule does provide authority for a permit condition similar to Section V.A.1.u, provided the Permit is corrected as explained in the preceding paragraph. As discussed above, the Rule authorizes air agencies to establish SO₂ emissions limits for certain sources at levels that will provide for the attainment of the 1-hour SO₂ Standard, based on air quality modeling.²² Accordingly, Section V.A.1.u should be revised to cite 40 C.F.R. § 51.1204 as well as Article XXI, §2103.12.a.2.F.

IV. ACHD SHOULD DEFER ISSUING A FINAL PERMIT UNTIL IT IS SATISFIED WITH ITS MODELING ANALYSIS OF SO₂ CONCENTRATIONS IN AREAS AFFECTED BY THE PLANT'S EMISSIONS

If ACHD's air dispersion modeling adequately demonstrates that the Permit's SO₂ emissions limit is set as required to ensure attainment of the 1-hour SO₂ Standard, no further modeling should be necessary. In that case, Section V.A.1.u of the Permit is superfluous and should be deleted.

On the other hand, if ACHD is not confident in its modeling analysis, it should not renew the Permit until it performs a more defensible modeling analysis, and is able to set the Permit's SO₂ emissions limit as indicated by that analysis. The SO₂ Data Requirements Rule allows ACHD until January 13, 2017 to improve its modeling analysis;²³ ACHD should take advantage of that time rather than issue the Permit with an SO₂ emission limit that it believes may be invalid. If ACHD does determine that it needs to perform additional modeling before it submits a final emissions limit on January 13, 2017, it should defer issuing a final Permit until that date, at which time Section V.A.1.u could be deleted from the Permit.

²¹ See 40 C.F.R. § 70.6(a)(1)(i) (stating that a Title V Operating Permit "shall specify and reference the origin of and authority for each term or condition, and identify any difference in form as compared to the applicable requirement upon which the term or condition is based").

²² See 40 C.F.R. § 51.1204.

²³ See 40 C.F.R. § 51.1204.

V. COMPLIANCE WITH THE SO₂ DATA REQUIREMENTS RULE AND ATTAINMENT OF THE 1-HOUR SO₂ STANDARD IN AREAS AFFECTED BY THE PLANT'S SO₂ EMISSIONS SHOULD BE DETERMINED WITH MONITORED DATA RATHER THAN MODELED DATA

Part of Allegheny County (although not the areas in the vicinity of the Plant) was designated as nonattainment for the 1-hour SO₂ Standard in 2012.²⁴ Consequently, ACHD is obligated to develop a SIP for that nonattainment area, including a modeling analysis that demonstrates the adequacy of the control strategies employed by the SIP.²⁵ It is GASP's understanding that ACHD has been unable to develop a model that matches historic, monitored SO₂ concentrations in the nonattainment area, likely as a result of the area's complex topography and the location of sources within the area – specifically, large sources clustered in river and stream valleys that are surrounded by relatively high, steep ridges that cause localized inversions and unpredictable local wind patterns. Further, GASP understands that the difficulty ACHD experienced in developing an accurate model for the nonattainment area prevented it from making a timely SIP submission.²⁶

Indeed, EPA has recognized that air agencies may have considerable difficulty using air quality modeling to determine SO₂ concentrations accurately in areas around some sources that are subject to the Data Requirements Rule:

Sources that may not be easily characterized through dispersion modeling include a source situated in an area of complex terrain and/or situated in a complex meteorological regime and areas that have multiple, relatively small sources with overlapping plumes.²⁷

For such sources, “EPA strongly encourages air agencies to consider using monitoring to characterize air quality.”²⁸

²⁴ See Air Quality Designations for the 2010 Sulfur Dioxide (SO₂) Primary National Ambient Air Quality Standard; Final Rule, 78 Fed. Reg. 47191, 47203 (Aug. 5, 2013).

²⁵ See 40 C.F.R. § 51.112(a).

²⁶ See Findings of Failure to Submit State Implementation Plans Required for Attainment of the 2010 1-Hour Primary Sulfur Dioxide National Ambient Air Quality Standard (NAAQS); Final Rule, 81 Fed. Reg. 14736, 14737 (March 18, 2016) (making finding of failure to submit).

²⁷ Data Requirements Rule for the 1-Hour Sulfur Dioxide (SO₂) Primary National Ambient Air Quality Standard (NAAQS); Proposed Rule, 79 Fed. Reg. 27446, 27460 (May 13, 2014).

²⁸ *Id.*

These complicating factors are also present in the areas affected by the Plant's SO₂ emissions. It is likely that ACHD will have the same difficulty accurately modeling the Plant's SO₂ emissions in the affected areas as it has in the nonattainment area, and possible that no model will be able to portray the impact of the Plant's SO₂ emissions accurately. Accordingly, ACHD should characterize SO₂ concentrations in the affected areas by monitoring them, as authorized by SO₂ Data Requirements Rule.²⁹ Should ACHD decide to monitor SO₂ concentrations in the affected areas, Section V.A.1.u of the Permit would become superfluous and should be deleted.

²⁹ See 40 C.F.R. § 51.1203(c).