

BEFORE THE ENVIRONMENTAL APPEALS BOARD
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C.

In re:)
)
)
Tucson Electric Power) Appeal No. PSD 18-02
Irvington/H. Wilson Sundt Generating) Pima County Department of
Station) Environmental Quality
)
) PSD Permit No. 1052
)

**PIMA COUNTY'S RESPONSE TO
SIERRA CLUB'S PETITION FOR REVIEW**

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A	February 23, 2018 letter

Introduction

The EPA Environmental Appeals Board (“Board”) should deny review of the challenge brought by Sierra Club (“Petitioner”) to the federal Prevention of Significant Deterioration (“PSD”) permit issued by the Pima County Department of Environmental Quality (the “County”) on August 8, 2018 to the Tucson Electric Power (“TEP”) Irvington Generating Station (“IGS”). The permit was incorporated into a revision to TEP’s Title V/Class I operating permit, and authorizes TEP to construct and operate ten natural-gas fired, reciprocating internal combustion engines (“RICE”) at the IGS in Pima County (the “Rice project”). The PSD permit regulates the RICE project’s emissions of several pollutants that triggered PSD review. The combined PSD/Title V/Class I permit also imposes requirements to limit the RICE project’s emissions of nitrogen oxides (“NO_x”) to below the threshold that would trigger PSD review for NO_x; this NO_x limit is the sole focus of Sierra Club’s Petition.

Sierra Club’s Petition alleges that the County based its decision concerning the sufficiency of the permit’s NO_x emission limit on “clearly erroneous interpretations of statutory PSD requirements and implementing regulations as well as upon clearly erroneous findings of fact.” Petition at 2. However, the County’s PSD permit decision for the IGS is fully supported by the record, including a detailed Technical Support Document (“TSD”) and the response to comments

document (“RTC”). The Board should deny review of the permit because Sierra Club has failed to demonstrate clear error, abuse of discretion, or an important policy consideration warranting review of the County’s decision. In addition, Petitioner has failed to meet the applicable procedural requirements for Board review.

Factual and Procedural Background

The County administers the federal PSD permitting program within Pima County, Arizona, under a delegation agreement with EPA Region 9.¹ The County issues permit decisions under the delegation agreement in accordance with the requirements of 40 C.F.R. § 52.21 and 40 C.F.R. Part 124, Subparts A and C.

TEP operates the IGS, an electric utility power generating station in Pima County that generates electricity by fossil fuel combustion (natural gas, liquid fuel) and landfill gas combustion.² Ex. 4 (TSD) at 2. The IGS is a major stationary source of criteria pollutants under the Clean Air Act and operates within an attainment area. *Id.* at 11-12. The IGS units are permitted to operate 24 hours a

¹ The currently applicable delegation agreement is available at: <https://www.epa.gov/caa-permitting/pima-county-department-environmental-quality-psd-delegation-agreement>. The agreement delegates authority to the Pima County Air Quality Control District which is the air pollution control agency in Pima County. *See* Pima County Code § 17.04.080. The District operates within the Pima County Department of Environmental Quality and is governed by the Pima County Board of Supervisors. *Id.* and § 17.04.100. The term County refers to both the Pima County Air Quality Control District and the Pima County Department of Environmental Quality. The Pima County Code is available online: https://library.municode.com/az/pima_county/codes/code_of_ordinances

² The IGS is also referred to as the H. Wilson Sundt Generating Station.

day, 365 days a year. *Id.* at 4. TEP intends to modernize and expand the IGS to provide reliable, efficient, grid-balancing resources during peak periods of power demand. *Id.* at 1. TEP identified RICE as the best option to expand generation and integrate renewable resources. *Id.* On August 1, 2017, TEP filed an application with the County for the RICE project, seeking authorization to replace two existing 81 megawatt steam generating units at the IGS with up to ten RICE engines. *Id.* at 1 & 5. Each of the RICE engines has the net generating capacity of 19 megawatts. *Id.* at 5. The RICE project constitutes a major modification for certain pollutants under the preconstruction PSD permitting regulations, triggering PSD review for these pollutants, and also required a significant revision to the Title V/Class I operating permit for the IGS. Ex. 3 (Application) at 1-1.

Because the RICE project has the potential to significantly increase NO_x emissions, TEP completed a net emissions increase analysis to evaluate proposed NO_x emissions at the IGS. *Id.* at 12. In its application, TEP voluntarily proposed four controls to limit the net emissions increase for NO_x to less than the significance level set forth in 40 C.F.R. § 52.21(b)(23) that would trigger PSD review for a major modification: first, TEP proposed to shut down permanently one of the existing steam generating units I1 and I2 at the IGS within 180 days following initial startup of the fifth RICE unit; second, TEP proposed to shut down permanently the second of the existing steam generating units I1 and I2 at the IGS

within 180 days following initial startup of the tenth and final RICE unit; third, TEP proposed to install and continuously operate (except during startup) selective catalytic reduction (“SCR”) equipment on each RICE unit with a vendor-guaranteed NOx rate of less than 1.5 lbs/hr; and fourth, TEP proposed a NOx emission cap of 179.0 tons per year (tpy) for the ten RICE units. Ex. 3 at 4-6. Altogether, TEP’s proposed actions as reflected in its permit application would have resulted in a net emissions increase for NOx of 39.4 tpy. Ex. 3 at 4-6.

However, prior to the public comment period, TEP agreed to further reduce the NOx emissions cap for the ten RICE units from 179 tpy to 170.0 tpy, thus reducing the proposed net emissions increase for NOx to 30.6 tpy, in order to provide an additional margin of 9.4 tpy below the 40 tpy PSD significance threshold for NOx. *See* Attachment A (February 23, 2018 letter); *see also* Ex. 4 at 12. Accordingly, while other emission limits in the permit are PSD limits, the NOx emission cap of 170.0 tpy is not a PSD limit, but instead limits the RICE project’s NOx emissions to a level below the threshold that would trigger PSD review for NOx. *See* 40 C.F.R. § 52.21(b)(23); Pima County Code § 17.04.340(A)(212) (defining ‘significant’ net emission rate for NOx).

On February 9, 2018, the County provided notice of its proposed approval of the PSD permit for public comment. Ex. 6 at 3 (RTC). Sierra Club submitted

comments on March 29, 2018. Ex. 1 (Sierra Club Comments).³ In its comments, Sierra Club asserted that the 170 tpy emissions cap for NO_x was not practicably enforceable because “using stack tests once every two years to determine whether the RICE units are in compliance with the permit is woefully inadequate.” *Id.* at 9, Comment IV. Sierra Club also commented that the “permit does not contain an unambiguous methodology for demonstrating compliance with the annual NO_x emission cap, and there is no support for the applicant’s ‘vendor guaranteed’ NO_x rate that is used to demonstrate compliance.” *Id.* at 9, Comment IV.

On August 8, 2018, after careful consideration of the comments received on its proposed permit decision for the RICE project, the County made its final permit decision, issuing the PSD Air Quality Permit #1052 to TEP. Ex. 5. The County issued its final TSD with the final permit, Ex. 4, and responded to the public comments on the proposed permit. Ex. 6.

In responding to Sierra Club’s comments on the enforceability of the permit’s NO_x emissions limits, the County explained that “[t]he proposed permit for the RICE project requires annual source tests for NO_x, CO, VOC, and PM₁₀/PM_{2.5}, but does not rely solely upon these source tests to ensure practicable enforceability of permit limits.” *Id.* at 10. Rather, the County continued, “[t]he proposed permit requires each engine to operate with a [SCR] system (Proposed

³ The County extended the public comment period until March 29, 2018. Ex. 6 at 3.

Permit Specific Condition II.A.1.c) as an add-on control device for NO_x and includes monitoring, recordkeeping, and reporting requirements of multiple SCR operating parameters on a continuous basis.” *Id.* In response to Sierra Club’s comments related to the methodology for demonstrating compliance and vendor guaranteed rates, the County made two revisions to Condition II.C.9 of the permit. The County “revised Condition II.C.9 to include a more detailed compliance determination methodology, expressed in the form of an equation. This methodology clearly indicates the emission factors and monitored data that will be used when calculating total NO_x emissions from the engines.” *Id.* at 13. The County also “revised Condition II.C.9 to reference vendor specified rather than vendor guaranteed emission rates” and required the use of a cold startup NO_x emission factor, which is inherently more conservative than a warm startup NO_x emission factor, for every startup regardless of whether the engine is already warm. *Id.* at 12-13.

The County also revised permit condition B.V.E.1 “to require permanent shutdown of Units I1 and I2 prior to initial startup of the first RICE unit.” *Id.* at 5; *see also* Ex. 5 (Permit) at 37. “This will ensure that the shutdown of Units I1 and I2 occur within the contemporaneous window for the RICE project, and ensure that emission decreases associated with the shutdowns are creditable.” Ex. 6 at 5-6.

Standard of Review

A petitioner seeking review of a PSD permit decision must demonstrate that each issue being raised in the petition was raised during the public comment period. 40 C.F.R. § 124.19(a)(4)(ii). “If the petition raises an issue that the Regional Administrator addressed in the response to comments...then petitioner must provide a citation to the relevant comment and response and explain why the Regional Administrator’s response to the comment was clearly erroneous or otherwise warrants review.”⁴ *Id.* A petitioner also must “demonstrate that each challenge to the permit decision is based on a finding of fact or conclusion of law that is clearly erroneous.” 40 C.F.R. § 124.19(a)(4)(i). If the petitioner is able to satisfy this burden, the Board’s review of a PSD permit is discretionary. *In re City of Palmdale*, 15 E.A.D. 700, 704 (EAB 2012). “The Board will uphold a permitting authority’s reasonable exercise of discretion if that decision is cogently explained and supported in the record.” *Id.* (citations omitted). The Board’s power of review “should be sparingly exercised” and “most permit conditions should be finally determined at the [permit issuer’s] level.” *Id.* quoting 45 Fed. Reg. 33,290, 33,412 (May 1980).

⁴ “Regional Administrator means the Regional Administrator of the appropriate Regional Office of the Environmental Protection Agency or the authorized representative of the Regional Administrator.” 40 C.F.R. § 124.2(a). As explained above, the County has been delegated responsibility to conduct new source review under the federal PSD regulations at 40 C.F.R. § 52.21 by EPA Region 9.

Argument

The Sierra Club raises one narrow issue in its petition: whether the PSD permit for the IGS fails to include practicably enforceable conditions that ensure compliance with the NOx emissions cap.⁵ Petition at 2-3. Sierra Club claims that the permit conditions are not enforceable based solely on its mistaken assertion that the PSD permit “only requires testing of NOx emissions once every two years, based on a single-day stack test.” Petition at 5. But the permit requires much more. The permit requires “performance tests of at least five RICE in each calendar year.” See Ex. 5 at 27, condition II.D.1. Further, TEP must test each unit at “25, 40, 70, and 100 percent of peak load or at a minimum peak load capacity in the normal operating range of the engine.” Ex. 5 at 27, condition II.D.2.b. And, as the County explained in its responses to Sierra Club’s comments, the permit includes monitoring and data collection requirements that will be used to calculate NOx emissions from the RICE units on a monthly basis in addition to the 12-month rolling total, and to continuously ensure the proper operation of the SCR during non-startup conditions. Ex. 6 at 11. Sierra Club does not explain why it believes

⁵ The establishment of the NOx emissions cap in the permit was developed in accordance with applicable requirements for such caps in Class I permits under Pima County Code § 17.12.050. While the NOx emissions cap is not a requirement under 40 C.F.R. § 52.21, it provided a basis for the County’s determination that the RICE project would not result in NOx emissions above the significant threshold that would trigger PSD review for NOx. The Board addressed a similar challenge to a permitting authority’s reliance on such a permit limit in *In re Pio Pico Energy Center*, 16 E.A.D. 56 (EAB 2013).

the County's responses or changes to the permit are inadequate. Because the County adequately responded to Sierra Club's comments and the record supports the County's decision to issue the permit, review of the permit is not warranted.

I. Sierra Club fails to explain why the County's responses to its comments were clearly erroneous, and thus doesn't meet its burden of demonstrating that Board review is warranted.

Because Sierra Club's petition is essentially a repackaging of the comments it made in regards to the NOx emissions cap, it has not met its burden to show that the permit should be reviewed. *See* 40 C.F.R. § 124.19(a)(4)(ii) (petitioner must explain why permitting authority's response to the comment was clearly erroneous or otherwise warrants review); *City of Palmdale* at 723 citing *Mich. Dep't Env'tl. Quality v. EPA*, 318 F.3d 705, 708 (6th Cir. 2003) (“[Petitioner] simply repackag[ing] its comments and the EPA's response...does not satisfy the burden of showing entitlement to review.”). Sierra Club dedicates over five pages of the petition to selected excerpts of comments, responses, and changes to the permit conditions. Sierra Club concludes without explanation that “[the County's] responses to Sierra Club's comments were inadequate, and did nothing to address the fact that the NOx cap remains practicably unenforceable.” Petition at 12.

The Sierra Club doesn't address the County responses explaining the reasons why the permit limits are practicably enforceable. The County provided several pages of explanation on this very issue. *See* Ex. 6 at 10-13 (explaining why the

County “disagree[s] with the commenter’s assertion that the permit lacks sufficient testing, monitoring, and recordkeeping requirements to ensure that the permit limits are practicably enforceable” and disagrees with “the commenter’s assertion that the NOx emission cap is unenforceable”). Sierra Club may continue to disagree with the County’s responses, but that mere disagreement doesn’t satisfy Sierra Club’s burden of demonstrating that the County’s rationale and determination, as explained in those responses, was inadequate. *See In re Pio Pico* at 143 (finding that petitioner’s “statements that it is unsatisfied with the [permitting authority’s] explanation...do not demonstrate that review of this issue is warranted given the high threshold a petitioner must meet to obtain review of a permit issuer’s fundamentally technical decision that is supported in the record.”). Sierra Club must at least explain why it thinks the County’s responses are clearly erroneous. 40 CFR § 124.19(a)(4)(ii). Having failed to do so, Sierra Club’s challenge should be dismissed for failure to meet its burden to show that review is warranted in this case.

II. The County did not err in issuing the permit because the permit includes enforceable conditions to ensure compliance with the NOx emissions cap.

The Sierra Club argues that “the County clearly erred by failing to include practicably enforceable conditions in the final PSD permit that ensure compliance with the 170 tpy NOx emissions cap.” Petition at 17. Sierra Club has not met its

burden of showing that the County's decision was clearly erroneous under 40 C.F.R. § 124.19(a)(4)(i) because, as described above, the County did include practicably enforceable conditions in the permit to limit NO_x and reasonably relied on those conditions to determine that the RICE project's NO_x emissions would not exceed the relevant PSD significance threshold and thereby trigger PSD review for NO_x. The permit requires TEP "to perform performance tests and develop unit-specific NO_x emission factors (Condition [Part B] II.D.1 and 2), monitor control device and engine operating parameters (Condition [Part B] II.B) including heat input and hours and modes of operation (i.e., startup/nonstartup), and record and report NO_x emissions on a monthly basis (Condition [Part B] II.C.9 and 10)." Ex. 6 at 12. The compliance determination methodology applies measured emission factors and monitoring data (including heat input and mode of operation) that is used in the NO_x emission calculation on a monthly basis and in accordance with a clearly-defined equation set forth in the permit. Ex. 6 at 13. Moreover, the compliance determination methodology is based on conservative assumptions about NO_x emission factors that inherently over-calculate reported NO_x emissions during startup as compared to the units' actual emissions. *Id.* In addition, the permit requires TEP to monitor control equipment performance parameters continuously to ensure the SCRs are operating properly. Ex. 5 at 23. The permit

further requires TEP to shut down an engine if the SCR does not function properly.

Id.

Sierra Club's petition doesn't provide any analysis of the additional conditions added to Part B of the permit. Instead, it focuses almost entirely on repeating its mistaken belief that the permit "only requires testing of NOx emissions once every two years, based on a single-day stack test." Petition at 5. However, the permit actually requires TEP to "conduct performance tests of at least five RICE in each calendar year." *See* Ex. 5 at 27, condition II.D.1. Still, the County "acknowledge[s] that EPA has indicated, as noted by the commenter, that annual source tests alone are insufficient to assure compliance with emission limits." Ex. 6 at 10. And based on this, the County has included the additional monitoring and operating data collection requirements, along with a compliance determination methodology, in the permit. *Id.*

Sierra Club is asking the Board to second guess the County's technical judgment and explanation for the enforceability of the NOx emissions cap. *See In re Town of Westborough*, 10 E.A.D. 297, 311-12 (EAB 2001) ("declin[ing] to second-guess the Region's technical judgments and explanations for rejecting [petitioner's] alternate approach where petitioner failed to address permit issuer's substantive responses to comments on these technical issues). The Board should decline to do so and deny Sierra Club's petition for review.

III. Even if Sierra Club had met its burden, the NOx emissions limit is practicably enforceable.

Sierra Club argues that to be practicably enforceable the permit conditions must “establish a clear legal obligation for the source [and] allow compliance to be verified.” Petition at 6.

The legal obligation is clear -- NOx emissions are capped at 170.0 tpy. TEP agreed to limit the NOx emissions cap from the ten RICE engines to 170.0 tpy to avoid the PSD requirements for NOx. *See* Attachment A (February 23, 2018 letter). Implementing the emissions cap, the net emissions increase of NOx from the RICE project will be 30.6 tpy and, therefore, less than the PSD significant emission rate of 40 tpy. Ex. 4 at 12; *see also In the Matter of: Hu Honua Bioenergy Facility Pepeekeo, Hawaii*, Order on Petition No. IX-2011-1 at 16 (February 7, 2014) (“[I]f a permit applicant agrees to an enforceable limit that is sufficient to restrict [potential to emit], the facility’s [potential to emit] is calculated based on the limit”, *quoting In the Matter of Cash Creek Generation, LLC*, Order on Petition No. IV-2010-4 at 15 (June 22, 2012)).

An emission limit can be relied upon to restrict a source’s potential to emit only if it is legally and practicably enforceable. *Cash Creek* at 15. To be considered practically enforceable, “an emissions limit must be accompanied by terms and conditions that require a source to effectively constrain its operations” and “that are sufficient to enable regulators and citizens to determine whether the

limit has been exceeded and, if so, to take appropriate enforcement action.” *In the Matter of Orange Recycling and Ethanol Production Facility, Pencor-Masada Oxynol, LLC*, Order on Petition No.: II-2001-05 at 7 (April 8, 2002). As the County explains in its response to comments, the permit requires multiple types of monitoring, including a NO_x process monitor, which monitors NO_x concentrations and injects ammonia into the system to maintain concentration levels:

“First, we note that the proposed permit requires extensive monitoring of control device operating parameters to assure that the control devices are operating appropriately at all times. The proposed permit requires each engine to operate with a Selective Catalytic Reduction (SCR) system (Proposed Permit Specific Condition II.A.1.c) as an add-on control device for NO_x, and includes monitoring, recordkeeping, and reporting requirements of multiple SCR operating parameters on a continuous basis. SCR systems use an ammonia injection system and a catalyst bed to reduce NO_x emissions. Ammonia selectively reduces NO_x to N₂, and is injected into the exhaust gas stream upstream of a catalyst bed. The ammonia reacts with NO_x to form N₂ on the catalyst surface, which specifically promotes the NO_x to N₂ reaction...As a result, in addition to hours of operation of the engine, the proposed permit requires monitoring of the SCR ammonia injection rate and SCR outlet temperature, and also requires the use of an SCR process monitor that will calculate outlet NO_x concentration (proposed permit specification II.A.1.c.iv).”

Ex. 6 at 10.

In sum, the County has imposed practicably enforceable conditions for NO_x in the permit by combining requirements for testing, monitoring of the SCR system, recordkeeping, and reporting, which appropriately provide for compliance verification and adequately ensure that NO_x emissions from the RICE project will remain below the emission limit and the relevant PSD significance threshold.

IV. Conclusion

Sierra Club has not met its burden under 40 C.F.R. § 124.19(a)(4)(ii) to explain why the County's responses to its comments were clearly erroneous. Nor has Sierra Club met its burden to demonstrate that the County has made a finding of fact or conclusion of law that is clearly erroneous in determining that the RICE project's NO_x emissions are not subject to PSD review. Because the County adequately responded to Sierra Club's comments and the record supports the County's decision to issue the permit, the Board should deny Sierra Club's petition.

RESPECTFULLY SUBMITTED October 1, 2018.

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STATEMENT OF COMPLIANCE WITH THE WORD LIMITATION

I hereby certify that this Response to the Petition for Review submitted by the County, excluding the Table of Contents, Table of Authorities, Statement of Compliance, and the attached Certificate of Service, contains 3,888 words, as calculated using Microsoft Word.

By: /s/ Michael LeBlanc
Michael LeBlanc
Deputy County Attorney

CERTIFICATE OF SERVICE

I certify that the parties below have consented to electronic service and on October 1, 2018 I served a copy of Pima County's Response to the Petition for Review in the matter of Tucson Electric Power Irvington/H. Wilson Sundt Generating Station, EAB Appeal No. PSD 18-02, by email.

By: /s/ Destiny Duda-Phillips
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