



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 7**

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Dec 17 2015

Ms. Kate Gleeson, Esq.
Attorney
Environmental Practice Group
Kansas Department of Health and Environment
1000 SW Jackson, Suite 560
Topeka, Kansas 66612

Dear Ms. Gleeson:

I write to address recent submittals made to your office by Columbian Chemicals regarding a proposed boiler project at the Company's Hickok facility in Ulysses, Kansas. Columbian seeks your guidance on whether the project would trigger permitting obligations under the Clean Air Act's New Source Review ("NSR") program and Kansas' State Implementation Plan. Columbian has submitted an "Air Permit Review and Strategy" report, drafted by SAGE Environmental Consulting, which purports to address the issue of NSR applicability and presents a series of tables that are meant to serve as emissions calculations to that end. Columbian followed up on the report with a letter to your office—cc'ing U.S. EPA and the Department of Justice—which was dated July 20, 2015, and which further addressed the Company's boiler project as it relates to the requirements of the Clean Air Act's NSR provisions. As both the consulting report and the Company's subsequent letter set out to interpret federal Clean Air Act regulations, I am writing to address certain inaccuracies in Columbian's construction of the regulations. In doing so, EPA is in no way rendering a determination on the applicability of the NSR program's requirements to Columbian's proposed boiler project. Additionally, EPA is neither accepting nor denying the accuracy of any of the factual assertions upon which Columbian's analysis is based. NSR applicability inherently requires a case-by-case and fact-intensive analysis; my purpose here is simply to address the legal framework in which that analysis should take place.

Kansas incorporates EPA's regulations at 40 C.F.R. 52.21 by reference into its EPA-approved State Implementation Plan. *See* Kansas Administrative Regulations 28-19-350(b). As you know, these NSR regulations provide two methods for calculating whether a proposed physical change or change in the method of operation ("change") to an existing unit constitutes a "major modification" that "would result" in a significant emissions increase and a significant net emissions increase, thereby triggering permitting obligations. 40 C.F.R. § 52.21(b)(2)(i). The two applicability tests are known as the "actual-to-potential" test and the "actual-to-projected-actual" test.

Under the actual-to-potential test, an owner or operator calculates future emissions increases caused by the change by comparing its facility's pre-change baseline actual emissions levels to its "potential to emit" or "PTE" after the change, a measure of a unit's maximum potential emissions given its physical and operational design. *See* 67 Fed. Reg. 80,186, 80,188 (Dec. 31, 2002); 40 C.F.R. § 52.21(b)(4). PTE is generally calculated for a unit under the assumption that the emitting unit would operate year round at its maximum capacity, but enforceable restrictions on operations or emissions that restrict a unit's



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capacity to emit a pollutant may be taken into account in calculating a unit's PTE. *See* 40 C.F.R. § 52.21(b)(4). When PTE is used as the measure of post-change emissions as in the actual-to-potential test, all possible emissions increases "are automatically attribute[d] ... to the change." 67 Fed. Reg. at 80,194; *see also* 63 Fed. Reg. 39,875, 39,860 (July 24, 1998).

In 2002, EPA "supplement[ed] the actual-to-potential applicability test with an actual-to-projected-actual applicability test." 67 Fed. Reg. at 80,189. Under that test, an owner or operator compares its facility's pre-change baseline actual emissions to the unit's "projected actual emissions," which is the highest annual emissions the unit is projected to emit the pollutant in the five years (or, in some circumstances, ten years) following the date that the unit resumes regular operation after the proposed change, taking into account "all relevant information." 40 C.F.R. § 52.21(b)(41). However, the EPA had recognized in a prior rulemaking that, in performing an analysis of the projected emissions that result from the proposed change, an operator might discover that the occurrence of a projected post-project emissions increase (or some portion thereof) was merely coincidental and not the result of the proposed modification. The Agency thus adopted the so-called "demand growth exclusion." 57 Fed. Reg. at 32,327. This exclusion from a projected increase applies to "that portion of the unit's emissions following the project that an existing unit could have accommodated during the [baseline period] and that are also unrelated to the particular project, including any increased utilization due to product demand growth." 40 C.F.R. § 52.21(b)(41)(ii)(c). The demand growth exclusion therefore has two distinct components: (1) the unit must have been able to accommodate the excluded emissions during the baseline period, and (2) the excluded emissions must be unrelated to the proposed modification. In other words, where a certain portion of the facility's projected emissions increase is beyond the unit's capabilities during the period used to calculate the baseline actual emissions, or where it would not have been projected to occur but for the proposed changes, that portion cannot be excluded from the actual-to-projected-actual analysis. 57 Fed. Reg. at 32,326–27. In addition, as reflected in a March 25, 2013 letter concerning a prior PSD applicability analysis of a separate heat exchanger project by Columbian Chemicals, actual production rates used in the capable of accommodating analysis should be based on the actual production rates that the unit could consistently achieve during the baseline period. Letter from Mark A. Smith, Chief, Air Permitting and Compliance Branch, EPA Region 7, to Marian Massoth, Air Permitting Chief, Kansas Department of Health and Environment, at 2.

Columbian's submittals apply neither the actual-to-potential nor the actual-to-projected-actual tests for NSR applicability. Instead, the Company creates and applies its own test, which is not permitted under the NSR provisions implementing the Clean Air Act (hereafter, generally, "NSR Rules"). 40 C.F.R. § 52.21. According to Columbian, one way to calculate the emissions increase is:

$$\textit{Emissions Increase} = \textit{Potential to Emit} - \textit{Baseline Actual Emissions} - \textit{Demand Growth}$$

This formula is not an applicability test available under the NSR Rules. The demand growth exclusion that Columbian purports to apply may not be applied where the projection is based on a facility's potential to emit. Since the demand growth provision is, by regulation, an exclusion of a portion of projected actual emissions, there is nothing for a source to assess—and nothing to exclude—when the source has decided not to calculate projected actual emissions. The NSR Rules even explicitly note that "*in lieu* of using the [actual-to-projected-actual] method set out in paragraphs (a)(41)(ii)(a) through (c)" (which includes the demand growth exclusion), sources can still use the actual-to-potential test. 40 C.F.R. § 52.21(b)(41)(ii)(d) (emphasis added). Thus, subtracting "demand growth" levels from a unit's "potential to emit" as Columbian does inappropriately combines two distinct applicability tests.

If Columbian employs the actual-to-potential test, then the demand growth exclusion does not apply. Even if Columbian intended to apply the actual-to-projected-actual applicability test and provided Hickok's projected actual emissions in place of the Company's potential to emit calculation, its subtraction of emissions based on the demand growth exclusion would still fail to follow the applicability procedures under the NSR Rules. Specifically, Columbian's subtraction of emissions based on the demand growth exclusion fails to address the two explicit requirements of that provision: (1) the unit was capable of accommodating the production during the baseline period and (2) the emissions to be excluded are wholly unrelated to the project.

To calculate excludable emissions under the demand growth exclusion, Columbian sets out to determine what the facility was "capable of accommodating (COA) during the baseline without the project."¹ The Company then subtracts its baseline actual emissions from its "COA" value to determine demand growth or "DG," which it then plugs into the formula presented earlier. But this approach overlooks the explicit requirement set forth in the regulation that only that portion of a projected emissions increase that is "*also* unrelated to the particular project" may be excluded from the applicability analysis. Columbian's analysis fails to examine how much of its projected increase would occur even without the proposed boiler project, and so it fails to address the second requirement of the exclusion in which it seeks safe harbor. As the D.C. Circuit noted in *New York v. EPA*, the demand growth exclusion "establishes two criteria a source must meet before excluding emissions from its projection: (1) the unit could have achieved the necessary level of utilization during the [baseline period]; *and* (2) the increase is not related to the physical or operational change(s) made to the unit." 413 F.3d 3, 33 (D.C. Cir. 2005) (emphasis added); *see also* 67 Fed. Reg. at 80,203 (emissions resulting from increased operation must be attributed to the project if they are related to the project, "even if the operation of [the] emissions unit to meet [that] particular level of demand could have been accomplished" during the baseline period). In other words, only those increases in emissions that a unit could have accommodated and that it would have emitted even without the benefit of the planned change can be excluded under the demand growth provision.

Since the demand growth exclusion only allows for the exclusion of *unrelated* emissions increases from the NSR applicability determination, a mere showing that projected emissions may also be *related* to something other than the proposed work at issue is insufficient to satisfy the regulation's requirement. A

¹ Columbian calculates Hickok's "could have accommodated" levels by annualizing the facility's highest monthly average production levels that occurred during the baseline period. In support of this approach, the Company cites EPA's letter to Georgia Pacific, as approving that methodology. Letter from Gregg M. Worley, Chief, Air Permits Section, EPA Region 4, to Mark Robinson, Plant Manager, Georgia-Pacific Wood Products LLC (March 18, 2010). The Georgia Pacific letter addressed a particular situation. EPA notes that determination of what a specific unit could have accommodated is a case-by-case analysis, such that using the approach outlined in the EPA's letter to Georgia Pacific would not necessarily be appropriate in all situations (e.g., it may not be appropriate for units that have seasonal variations in operating capabilities or units with different emission factors in the baseline period). For purposes of this letter alone, EPA assumes—without deciding—that the approach is an appropriate method for determining production and emissions levels that the Hickok facility was realistically capable of sustaining during the baseline period selected by the Company, and that the Company's representations of historic production levels are accurate. EPA notes, however, that Columbian appears to multiply the production level by an emissions factor which is based neither on its historical emissions rates nor on its projected emissions profile—and is instead based on permit limits during the baseline period. Such a calculation is improper without further consideration of whether that emissions factor realistically reflects the unit's emissions during the baseline period. Emissions excluded from the analysis under the demand growth exclusion should be based on the same operating assumptions made when initially projecting post-project actual emissions under 40 C.F.R. § 52.21(b)(41)(ii)(a) and (b). Indeed, as EPA noted in the Georgia Pacific letter: "before any given emissions may be excluded under 40 C.F.R. § 52.21(b)(41)(ii)(c) on the basis that they result from future demand growth, those emissions must first be part of the projected actual emissions based on 'all relevant information . . . used to make the projection.'" *Id.* at 2.

projected emissions increase can have many proximate causes, and as EPA noted in 1998, “a conclusion that an emissions increase at a plant is in response to market demand does little to determine whether the increase results from a change at the plant; an affirmative answer to the first question is consistent with an affirmative answer to the second.” 63 Fed. Reg. at 39,860; *see also New York v. EPA*, 413 F.3d at 33 (demand growth exclusion only applies “so long as the growth is unrelated to the change”). Thus, while it is necessary, it is not sufficient for Columbian to determine that Hickok “could have accommodated” projected emissions levels, nor even that projected emissions levels also might be associated with projected increases in market demand. For Columbian to exclude a projected emissions increase under the demand growth exclusion, the excluded emissions must also be unrelated to the proposed boiler project. EPA recognizes there are “situations where the distinction can clearly be made,” *New York*, 413 F.3d at 32, but Columbian has not provided evidence or specific analysis to support its assertion that any and all projected emissions increases at Hickok would be unrelated to the proposed boiler project.

Notwithstanding these many legal inaccuracies, there may nonetheless be a path forward for Columbian to demonstrate in this context that it need not obtain an NSR permit for its boiler project at Hickok. If Columbian’s project neither expands the emission unit’s annual operating capacity nor enables an increase in utilization of its existing capacity, the projected emissions increase may be unrelated to the proposed change. Columbian could address these points and further develop its claim that any emissions increase would be “unrelated” to the proposed change. Alternatively, if Columbian determines that the project would result in a significant emissions increase with correct application of the projected actual emissions definition, it may still be able to avoid PSD if an appropriate “netting” analysis shows that the proposed boiler project would not result in a significant net emissions increase. 40 C.F.R. § 52.21(b)(3). Finally, if Columbian elects to determine NSR applicability based on PTE, Columbian could take an enforceable limitation to limit any post-project emission increases to levels below the PSD-triggering thresholds for the relevant pollutants.

If you have any questions about these comments, please feel free to contact me at (913) 551-7876.

Sincerely,

/s/

Mark A. Smith
Chief
Air Permitting and Compliance Branch

cc: Rick Brunetti, KDHE