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File No. 018282-0000

April 21, 2020

Barbara Baird
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South Coast Air Quality Management District
21865 Copley Drive
Diamond Bar, CA 91765

Re: Interpreting and Implementing Regulation XIII
During Permitting for NOx Landing Rules

Dear Barbara:

I am writing on behalf of the Regulatory Flexibility Group ("RFG") to more formally initiate discussion of certain issues stemming from the NOx BARCT "landing rules" adopted or under development to replace the NOx RECLAIM program. As you know, selective catalytic reduction ("SCR") will be deployed in many cases to meet updated NOx BARCT standards in the landing rules. The issues addressed herein relate primarily to the interpretation and implementation of Regulation XIII in the context of permitting SCR installations, and, specifically, the development and application of best available control technology ("BACT") requirements for ammonia and $PM_{2.5}$.

Some of the issues addressed below pre-date the transition out of RECLAIM, but are taking on greater importance now due to the complexity and costs associated with implementing the landing rules and the number of affected facilities. Some of the issues have been raised previously in working group meetings or written comments, but as facilities are now submitting permit applications to comply with the landing rules, we believe that a more focused discussion is necessary to resolve these issues. We are directing this letter to you because, for the most part, the issues pertain to interpretation of District regulations, which we view to be primarily within the purview of the District legal department. Our hope is that, upon resolution of the issues, appropriate direction and guidance will be provided to District permitting staff.

1. Ammonia BACT For Control Equipment

The first set of issues discussed herein relate to the imposition of BACT limits for ammonia in the context of an SCR installation. For the sake of discussion here, we are assuming that it is appropriate to impose BACT requirements on ammonia emissions in this context and focusing on ensuring that the limits are set at the appropriate level. However, Appendix A to this

letter explains why it may not be appropriate to impose ammonia BACT in this context because the source of the ammonia is Control Equipment.[1]

District rulemaking staff has included ammonia slip limits in some landing rules, and regardless of whether or not limits are contained in the relevant landing rule, permitting staff typically imposes ammonia limits through permit conditions. The authority for such limits is contained in Rule 1301(a), which states: "In addition to nonattainment air contaminants, this regulation will also limit emission increases of ammonia . . . from new, modified or relocated facilities by requiring use of Best Available Control Technology (BACT)." Consistent with the forgoing, Rule 1303(a)(1) states: "The Executive Officer or designee shall deny the Permit to Construct for any . . . new or modified source which results in an emission increase of any nonattainment air contaminant any ozone depleting compound, ***or ammonia*** unless BACT is employed for the new or relocated source or for the actual modification to an existing source." (emphasis added.)

a. Ammonia Limits Must Be Addressed During Rulemaking And Not Deferred To Permitting

Rulemaking staff initially established limits on ammonia in some of the landing rules that have already been adopted (e.g., Rules 1146 and 1134). More recently, however, rulemaking staff has decided not to include ammonia limits in landing rules and to defer to permitting staff to address ammonia as a new source review ("NSR") issue (e.g., Rule 1110.2). We believe that ammonia slip should be addressed in the landing rules. This will ensure that the implications of the ammonia limits are considered when setting the NOx BARCT standard. BARCT is defined as "an emission limitation that is based on the maximum degree of reduction achievable, taking into account environmental, energy, and economic impacts by each class or category of source." Health & Safety Code Section 40406. Staff cannot fully address the environmental, energy and economic impacts of its proposed NOx BARCT standards if it fails to take ammonia slip into consideration during the standard setting process.

b. Ammonia Limits Must Be Set At Levels That Have Been Achieved With Currently Available Technology For The Class And Category Of Source Under Review

Regardless of whether ammonia limits are addressed in the context of rulemaking, permitting, or both, the limits must be set at levels that can be achieved with currently available control technology and tailored to the specific class and category of equipment.

If it exists, the authority to impose ammonia limits in this context stems from the BACT requirement in Rule 1303(a)(1), meaning limits should be set at BACT levels, not BARCT levels. The California Supreme Court's decision in *American Coatings Ass'n v. South Coast Air Quality Management District,* 54 Cal 4th 446 (2012) ("*American Coatings"*) makes clear that BACT standards must be achievable with existing technology (i.e., they cannot be technology-forcing). The

[1] Throughout this letter, we make distinctions between Control Equipment and Basic Equipment as defined in District Rule 102.

Court stated that "'[b]est available control technology' is limited to extant technology because BACT is a standard that defines what technology must be used when industry seeks permission for imminent new construction." *American Coatings*, at 467 (citations omitted). Thus, if ammonia BACT limits are imposed on SCR units, they must be at levels that can be achieved with currently available technology for the class or category of source under review, taking into consideration all relevant factors, including the NOx BARCT standard to be achieved.

2. PM BACT For Basic Equipment

The second set of issues discussed herein relate to the imposition of PM BACT limits on the Basic Equipment to which the SCR is being applied. Permitting staff appears to believe that if the installation of SCR has the potential to result in an emission increase of one pound per day or more of $PM_{2.5}$ as a result of secondary particulate formation associated with ammonia slip, it is then appropriate to impose PM BACT on the Basic Equipment to which the SCR is being applied. As an alternative to actually implementing PM BACT on the Basic Equipment, staff may impose a PM limit to reduce the potential to emit of the Basic Equipment below the pre-existing baseline to "offset" the potential increase associated with the ammonia slip, thereby avoiding a net PM emission increase that, in staff's view, would otherwise trigger the requirement to implement PM BACT. Either approach presumes that it is appropriate to require BACT on the Basic Equipment in this scenario. For the reasons set forth below, we do not believe that the relevant language in Regulation XIII supports this interpretation.

a. $PM_{2.5}$ Is Regulated Exclusively Under Rule 1325

The PM that is created as a result of ammonia slip is $PM_{2.5}$, which is regulated exclusively under Rule 1325. As stated in the June 2011 Staff Report supporting adoption of Rule 1325, "Rule 1325 applies only to PM2.5 and its precursors and is the only New Source Review Rule affecting $PM_{2.5}$. The remainder of Regulation XIII does not apply to $PM_{2.5}$." Staff Report Proposed Rule 1325 – Federal PM2.5 New Source Review Program, June 2011 (p. 4). Rule 1325 requires installation of federal Lowest Achievable Emission Rate ("LAER") control technology (essentially equivalent to California BACT), for "major modifications" at "major polluting facilities." A "major polluting facility" is one that emits 70 tons per year (tpy) or more of $PM_{2.5}$. A "major modification" is one that results in a "significant" increase in emissions, which means an increase of 10 tpy or more of directly emitted $PM_{2.5}$ or 40 tpy or more of a $PM_{2.5}$ precursor (NOx, SO2, VOC and ammonia).

If the source is not a "major polluting facility" or the modification is not a "major modification," installation of LAER is not required. Note that in the case of precursor emissions, such as ammonia, the threshold is 40 tpy. The 10 tpy threshold for $PM_{2.5}$ applies only to directly emitted $PM_{2.5}$, not secondary $PM_{2.5}$. Any other interpretation would render the precursor thresholds meaningless, since secondary $PM_{2.5}$ would exceed 10 tpy well before ammonia emissions reached 40 tpy. Under accepted canons of statutory interpretation, every word and every provision is to be given effect, and none should be ignored. Further, no provision should be given an interpretation that causes it to have no consequence. Thus, in the context of SCR installations, unless ammonia emissions are 40 tpy or more, Rule 1325 does not require installation of LAER/BACT.

Because $PM_{2.5}$ is only regulated under Rule 1325, it is not appropriate to impose requirements under the authority of other provisions in Regulation XIII as a result of increases of $PM_{2.5}$ emissions, including secondary $PM_{2.5}$ resulting from ammonia slip.

b. Other Than Rule 1325, Regulation XIII Does Not Regulate Ammonia As A $PM_{2.5}$ Precursor

As stated above, ammonia is regulated as a $PM_{2.5}$ precursor under Rule 1325, which establishes a 40 tpy threshold for requiring installation of LAER/BACT. Direct emissions of ammonia are also regulated under the remainder of Regulation XIII, but ammonia is not regulated as a precursor other than under Rule 1325.

As stated in Rule 1301(a): "In addition to nonattainment air contaminants, this regulation will also limit emission increases of ammonia . . . from new, modified or relocated facilities by requiring use of Best Available Control Technology (BACT)." The term "non-attainment air contaminant" is defined in Rule 1302(z) as ". . . any air contaminant for which there is a national or state ambient air quality standard, ***or precursors to such air contaminant***, which . . ." has been designated as non-attainment by CARB or USEPA. Since the term "nonattainment air contaminant" encompasses precursors, if the intent was to regulate ammonia as a precursor, there would have been no need to specifically identify ammonia in Rules 1301(a) and 1303(a)(1). The fact that ammonia is specifically identified in the rules indicates that the intent was to limit direct emissions of ammonia, as opposed to regulating ammonia as a precursor. Therefore, an increase in ammonia emissions may trigger BACT for ammonia (i.e., an appropriate ammonia slip limit)[2], but Rule 1303(a)(1) does not authorize imposition of PM BACT requirements on the basis that ammonia resulted in an increase of secondary $PM_{2.5}$ emissions.

c. The BACT Requirement Extends Only To The Source Of The Emission Increase

Even if ammonia was regulated as a $PM_{2.5}$ precursor under Rule 1303, the scope of the PM BACT analysis is limited to the SCR unit and does not extend to the combustion source.

Rule 1303(a)(1) states: "The Executive Officer or designee shall deny the Permit to Construct for any . . . ***new or modified source which results in an emission increase*** . . . unless BACT is employed for the new . . . source or for the actual modification to an existing source." (emphasis added.) Rule 1302(ao) defines "source" as "any permitted individual unit, piece of equipment, article machine, process, contrivance, or combination thereof, which may emit ***or*** control an air contaminant." (emphasis added.) Thus, there are two types of "sources" – those that emit air contaminants, and those that control emissions. These two types of sources are defined in Rule 102 as "Basic Equipment" which is ". . . any article, machine, equipment or contrivance which ***causes*** the issuance of air contaminants" and "Control Equipment" which is

[2] As explained in Appendix A, imposition of ammonia BACT is not appropriate in this particular context because the source of the ammonia is Control Equipment.

". . . air pollution control equipment which ***eliminates, reduces or controls*** the issuance of air contaminants." (emphasis added.)

In the SCR installation scenario, the combustion source is an existing source (Basic Equipment), and the SCR unit is a new source (Control Equipment). The Basic Equipment is not a ***"new or modified source which results in an emission increase,"*** subject to the BACT requirement in Rule 1303(a)(1). It is not "new," it is not "modified," and its potential to emit is not increased relative to what it was prior to installation of the SCR unit. Therefore, the BACT requirement does not apply to the Basic Equipment, and it is not appropriate to require installation of PM BACT controls or to otherwise limit PM emissions from the Basic Equipment.

Some might argue that the SCR unit and the combustion source are not separate sources, but together constitute a single modified source. We believe that this interpretation is incorrect because it runs contrary to the definition of "source," which is "any permitted ***individual*** unit, piece of equipment, article machine, process, contrivance, or combination thereof, which may emit ***or*** control an air contaminant." (emphasis added.) This interpretation also ignores the distinction established in District rules between Basic Equipment and Control Equipment. However, even if one were to adopt this interpretation, it does not change the conclusion that the scope of the BACT analysis does not extend to the combustion source. In the case of a modified source, Rule 1304(a)(1) requires that BACT be employed "for ***the actual modification*** to an existing source." (emphasis added.) In this case, the "***actual modification***" is limited to installation of the SCR unit, and the remainder of the combustion source is not being modified in a way that could result in an emission increase. Therefore, the scope of the BACT analysis does not extend to the combustion source.

d. The Determination Of Whether Or Not A PM "Emission Increase" Has Occurred Must Include Consideration Of The NOx Reductions

The BACT requirement in Rule 1303(a)(1) applies only to a "new or modified source which results in an ***emission increase."*** (emphasis added.) Secondary $PM_{2.5}$ formation from an SCR unit is a function of NOx, SO_2 and ammonia emissions. The SCR unit will introduce ammonia, but it will also significantly reduce NOx emissions from the combustion source, meaning that there will be less NOx present to contribute to the formation of secondary $PM_{2.5}$. When evaluating whether or not a new source results in an emission increase, it is appropriate to take into consideration all of the emission-related effects produced by the new source, which, in the case of an SCR unit, include reduced NOx emissions from the existing combustion source. The determination of whether or not there is a net emission increase of secondary $PM_{2.5}$ must take into consideration the reduction in NOx emissions.

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We appreciate your attention to the issues addressed in this letter, and we look forward to discussing them further with you and members of the District rulemaking and permitting groups. If you have any questions, please do not hesitate to call me at (714) 755-8105 or email me at michael.carroll@lw.com.

Best regards,

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of LATHAM & WATKINS LLP

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Appendix A

District permitting staff appears to take the position that increases of ammonia emissions in excess of one pound per day may trigger BACT requirements for ammonia pursuant to Rule 1303(a). However, the BACT requirement in Rule 1303(a) does not apply to control equipment such as SCR.

Rule 1303(a)(1) regulates new or modified "sources." Rule 1302(ao) defines "source" as "any permitted individual unit, piece of equipment, article machine, process, contrivance, or combination thereof, which may emit ***or*** control an air contaminant." (emphasis added.) Thus, there are two types of "sources" – those that emit air contaminants, and those that control emissions. These two types of sources are defined in Rule 102 as "Basic Equipment" which is ". . . any article, machine, equipment or contrivance which ***causes*** the issuance of air contaminants" and "Control Equipment" which is ". . . air pollution control equipment which ***eliminates, reduces or controls*** the issuance of air contaminants."

Rule 1301(b)(1) states: "The provisions of this regulation shall apply to the installation of a new source and to the modification of an existing source ***which may cause*** the issuance of any nonattainment air contaminant, any ODC, or ammonia at any facility." (emphasis added.) Thus, the BACT requirement in Rule 1303 applies to sources that ***cause*** emissions – i.e., Basic Equipment, as distinct from Control Equipment that ***eliminates, reduces or controls*** emissions. Therefore, the BACT requirement does not apply to Control Equipment such as SCR units.