



CALPINE CORPORATION

NYSE CPN

4160 DUBLIN BOULEVARD
SUITE 100
DUBLIN, CA 94568
925.557.2224 (M)
925.479.9560 (F)

October 26, 2012

Via e-mail: clee@baaqmd.gov

Ms. Carol Lee
Bay Area Air Quality Management District
939 Ellis Street
San Francisco, California 94109

Re: Comments on the Bay Area Air Quality Management District's Proposed Amendments to Regulation 2 (Permits) New Source Review and Title V Permit Programs

Dear Ms. Lee:

Calpine Corporation ("Calpine") welcomes the opportunity to provide these comments on the Bay Area Air Quality Management District's ("BAAQMD" or the "District") proposed amendments to its New Source Review and Title V permit programs, as set forth at BAAQMD Regulation 2 (Permits), Rule 1 (General Requirements), Rule 2 (New Source Review), Rule 4 (Emissions Banking) and Rule 6 (Major Facility Review) ("Proposed Amendments").

I. INTRODUCTION AND SUMMARY

Calpine is the state's largest independent power producer, owns the state's largest fleet of combined heat and power ("CHP") or cogeneration facilities and is also the state's largest provider of renewable energy, generating over 725 megawatts ("MW") of renewable geothermal energy. Calpine also owns and operates more facilities subject to the District's Major Facility Review (Title V) permitting program than any other company.

Calpine understands that the District's Proposed Amendments of its new source review ("NSR"), prevention of significant deterioration ("PSD") and Title V permit programs are needed to satisfy the requirements of the U.S. Environmental Protection Agency's ("EPA's") Greenhouse Gas ("GHG") Tailoring Rule, as well as to address the federal requirements for fine particulate matter (i.e., particulate matter with an aerodynamic diameter of less than 2.5 microns ("PM_{2.5}")). Indeed, Calpine obtained the most recent federal PSD permit issued by the District for the ongoing construction of Russell City Energy Center, a highly efficient 620-MW combined cycle natural gas-fired power plant located in Hayward, California. The project's PSD permit, which was issued by the District pursuant to delegation of authority from EPA Region 9, was the first federal PSD permit to include "best available control technology" ("BACT") limits on GHG emissions.

Given Calpine's experience working with the District to obtain and defend the PSD permit for Russell City and, more generally, our experience permitting more major facilities in the Bay

Area than any other company, Calpine strongly endorses the District's proposal to move forward with adoption of amendments to Regulation 2 that can ultimately be approved by EPA as part of the California State Implementation Plan ("SIP") pursuant to 40 C.F.R. § 51.166. Implementation of the federal PSD program requirements pursuant to a SIP-approved program, rather than a delegation of authority from EPA Region 9, should avoid unnecessarily duplicative and lengthy processes associated with issuance of separate permits pursuant to both the District's rules and 40 C.F.R. § 52.21.

While we support the District's overall goals, we have one significant concern with the third and final draft of Proposed Amendments. Specifically, Calpine would ask that the District not finalize its proposal to require an unprecedented source impact analysis requirement for nonattainment pollutants. The source impact analysis requirement could be especially problematic with respect to the 24-hour PM_{2.5} National Ambient Air Quality Standard ("NAAQS"), for which the Bay Area is designated nonattainment. Our comments on this issue are described in more detail below.

II. THE DISTRICT SHOULD NOT FINALIZE PROPOSED REGULATION 2-2-308

In the final draft of the Proposed Amendments, BAAQMD proposes that "[t]he APCO shall not issue an authority to construct for a new or modified source that will result in a significant net increase in emissions of any pollutant for which a [NAAQS] has been established unless the APCO determines, based upon a demonstration submitted by the applicant, that such increase will not cause or contribute to an exceedance of any [NAAQS] for that pollutant." Proposed Amendments, Reg. 2-2-308 (entitled "NAAQS Protection Requirement"). Proposed Regulation 2-2-308 further states that this demonstration must be "made using the procedures for PSD Air Quality Impact Analyses." Although the source impact analysis would be required for all pollutants for which a NAAQS has been established, including non-attainment pollutants¹, "[s]uch demonstration shall not be required for ozone."² The Bay Area is designated non-attainment for the 8-hour ozone NAAQS and 24-hour PM_{2.5} NAAQS.

The second draft of proposed Regulation 2-2-308 would have required a source impact analysis for all pollutants for which a NAAQS has been established, including the ozone NAAQS. Calpine emphasized in its written comments on the second draft of the Proposed Amendments

¹ See BAAQMD, Final Staff Report, Updates to BAAQMD New Source Review and Title V Permitting Programs, Regulation 2; Rules 1, 2, 4, and 6, at 81 (Sep. 26, 2012) (hereinafter, "Final Staff Report"), available at:

<http://www.baaqmd.gov/~media/Files/Engineering/Proposed%20Reg%202%20Changes/Public%20Hearing/Final%20Reg%202%20Updates%20Staff%20Report%20September%2026%202012.ashx?la=en>.

² Proposed Amendments, Reg. 2-2-308.

that fulfilling the source impact analysis requirement for ozone would be unworkable.³ We appreciate that the District has exempted ozone from the Regulation 2-2-308 analysis requirement.

However, the proposed exclusion of ozone from the purview of Regulation 2-2-308 does not resolve our concerns with respect to requiring such a demonstration for all other nonattainment pollutants. While the District is currently developing documentation to submit to EPA demonstrating compliance with the NAAQS requirements for PM_{2.5},⁴ the Bay Area is currently designated nonattainment for the 24-hour PM_{2.5} NAAQS.

There are several reasons why Regulation 2-2-308 should not be approved in light of the potential difficulties applicants would experience demonstrating compliance with the 24-hour PM_{2.5} NAAQS.

First, it is clear that, under governing federal regulations, a NAAQS compliance demonstration is not required for nonattainment pollutants, and EPA has *never* previously required, to our knowledge, a jurisdiction to incorporate a requirement for such a demonstration for nonattainment pollutants into a nonattainment NSR (“NNSR”) permitting program as part of a SIP approval.

As the preamble to the rule implementing the NSR program for PM_{2.5} states, “[o]nly sources subject to PSD must conduct air quality modeling.”⁵ Indeed, both EPA’s Environmental Appeals Board and the U.S. Court of Appeals for the Ninth Circuit have affirmed that no provision of the Clean Air Act requires demonstration of attainment with the NAAQS for a nonattainment pollutant (in particular, 24-hour PM_{2.5}) as a prerequisite of granting a PSD permit.⁶

³ See Letter to Carol Lee from Barbara McBride, re: Comments on the Bay Area Air Quality Management District’s Proposed Amendments to Regulation 2 (Permits) New Source Review and Title V Permit Programs, at 4 (June 25, 2012) (“June 2012 Comments”) (stating that “...it is extremely difficult to model the complex interactions of pollutants and atmospheric chemistry that result in ozone formation.”).

⁴ Final Staff Report, at 83, n. 70 (“District Staff expect that EPA will fully approve the District’s submission [for the clean data determination] when it has had an opportunity to complete its review.”).

⁵ Final Rule, Implementation of the New Source Review (NSR) Program for Particulate Matter Less Than 2.5 Micrometers (PM_{2.5}), 73 Fed. Reg. 28321, 28335 (May 16, 2008).

⁶ *In re Russell City Energy Center, LLC*, PSD Appeal Nos. 10-01, 10-02, 10-03, 10-04 & 10-05, 15 Environmental Administrative Decisions ___, slip op. 122-127 (EAB, Nov. 18, 2010), available at: [http://yosemite.epa.gov/oa/EAB_Web_Docket.nsf/PSD%20Permit%20Appeals%20\(CAA\)/6AC7D419AF383FF9852577DF0069A6D1/\\$File/Denying%20Review....pdf](http://yosemite.epa.gov/oa/EAB_Web_Docket.nsf/PSD%20Permit%20Appeals%20(CAA)/6AC7D419AF383FF9852577DF0069A6D1/$File/Denying%20Review....pdf); *Chabot-Las Positas Community College*

We understand that the District believes proposed Regulation 2-2-308 is needed to satisfy 40 C.F.R. § 51.160(a) and (b), which, together, require that an approvable SIP must contain procedures for (i) determining whether any new or modified source will interfere with attainment or maintenance of any NAAQS, and (ii) preventing construction of a new or modified source if it will result in such interference.⁷ However, in its comments to the District, EPA acknowledged that, although dispersion modeling “could” be used to meet these requirements, they could also be met through other means, such as “demonstrating these emission increases are already accounted for as growth in emission projections of an attainment demonstration.”⁸ Thus, dispersion modeling on a source-by-source basis is not the only means of satisfying this requirement and we are aware of no instance in which EPA has previously required such a requirement as part of a “minor source” SIP.

Second, proposed Regulation 2-2-308 lacks regulatory coherence. Regulation 2-2-308 states that the source impact analysis must be conducted using the procedures specified in Regulation 2-2-305. In turn, the District notes that Regulation 2-2-305 incorporates by reference “the exemptions set forth in 40 C.F.R. Section 52.21(i).”⁹ One of the exemptions in 40 C.F.R. § 52.21(i) states that the requirements of, *inter alia*, section 52.21(k) (i.e., source impact analysis) do not apply “to a major stationary source or major modification with respect to a particular pollutant if the owner or operator demonstrates that, as to that pollutant, the source or modification is located in an area designated as nonattainment under section 107 of the Act.”¹⁰ Thus, the incorporated exemption makes clear that a NAAQS compliance demonstration is only required for attainment pollutants. This internal inconsistency further highlights that the District should not be requiring a NAAQS compliance demonstration for nonattainment pollutants, incorporating by reference the methodologies developed and utilized to demonstrate that a proposed source would not cause or contribute to a violation of the NAAQS for attainment pollutants.

Third, proposed Regulation 2-2-308 is unnecessary to ensure attainment of the NAAQS in the Bay Area. As the District itself notes, “[f]or ozone and PM_{2.5}, the two pollutants for which the

District v. EPA, 10-13870, memorandum disposition at 5 (9th Cir. May 4, 2012), available at: <http://www.ca9.uscourts.gov/datastore/memoranda/2012/05/04/10-73870.pdf>.

⁷ Final Staff Report, at 83-84.

⁸ Letter from Gerardo Rios, Chief Air Permits Office, EPA Region 9, to C. Lee, re: EPA Region 9 Comments on Draft Proposed Regulation 2, Rules 1 and 2 (Jul. 26, 2012), Enclosure, at 8.

⁹ Final Staff Report, at 78.

¹⁰ 40 C.F.R. § 52.21(i)(2).

Bay Area is designated as non-attainment, the District's emissions projections show an increase in emissions from stationary sources in future years, while at the same time showing overall reductions in total emissions leading towards attainment and maintenance of the NAAQS."¹¹ Such reductions will be assured through the other elements of the NNSR program. Indeed, applicants triggering the requirements of NNSR must achieve the lowest achievable emission rate ("LAER"), offset new emissions with creditable emissions reductions, certify that all major sources owned or operated by the applicant in the same state are in compliance, and conduct an alternative siting analysis that demonstrates net benefits. It is these requirements that will help ensure progress towards attaining the 24-hour PM_{2.5} NAAQS, obviating the need for a NAAQS compliance demonstration for PM_{2.5} (and any other nonattainment pollutant).

Fourth, proposed Regulation 2-2-308 should not be finalized because it may be extremely difficult, if not impossible, in certain locations throughout the Bay Area to demonstrate that a source will not cause or contribute to an exceedance of the 24-hour PM_{2.5} NAAQS.

The District is adopting the nonattainment NAAQS compliance demonstration requirement upon the assumption that modeling for secondary particulate formation will not be required. The District states that "...the modeling [for 24-hour PM_{2.5}] will be conducted in accordance with EPA's 'Guideline' in Appendix W and will follow the Guideline's requirements for PM_{2.5}, which require modeling of direct PM emissions only, and not the impacts from how any precursor emissions may subsequently combine in the atmosphere to form secondary PM_{2.5}."¹² However, EPA has acknowledged that "[s]econdary formation of PM_{2.5} from emissions of NO_x, SO_x and other compounds from sources across a large domain will often contribute significantly to the total ambient levels of PM_{2.5}, and may be the dominant source of ambient PM_{2.5} in some cases."¹³ For this reason, EPA recently granted reconsideration of Appendix W to develop appropriate modeling techniques to model secondary particulate formation attributable to a proposed source.¹⁴ While one might assume that EPA would not revise Appendix W to require modeling for secondary particulate until such time that adequate tools are available for use by an individual source, at this time, no such tools exist. Without an understanding of how those tools will work – again, tools that will in all likelihood be developed for the task of demonstrating

¹¹ Final Staff Report, at 84.

¹² Final Staff Report, at 81, n. 68.

¹³ Letter from Gina McCarthy, EPA Assistant Administrator, to Robert Ukeiley, at 3 (Jan. 4, 2012), *available at*:
http://www.epa.gov/scram001/10thmodconf/review_material/Sierra_Club_Petition_OAR-11-002-1093.pdf.

¹⁴ *Id.*

compliance in areas currently attaining the standard – it is simply impossible to know whether sources will even be able to demonstrate that they are not causing or contributing to the NAAQS and at what cost, should the Bay Area remain nonattainment for 24-hour PM_{2.5}.

Further, unless the monitored background concentrations in the vicinity of a proposed source or modification are sufficiently below the NAAQS, it may simply be impossible for an existing or new source to demonstrate that it would not cause or contribute to a violation of the 24-hour PM_{2.5} NAAQS. As a consequence, the District may be imposing a *de facto* construction moratorium upon those locations within the Bay Area that have monitored exceedances, while allowing construction to continue in those areas that are currently attaining the standard. At the very least, the District staff should prepare an evaluation for the Board, describing where, in particular, proposed Regulation 2-2-308 would act as a bar to further construction and where such construction would be allowed.

Additionally, it is not an adequate response to suggest that any source can continue to be constructed, so long as it would cause no exceedance of the SIL. The applicable SIL for 24-hour PM_{2.5}¹⁵ is 1.2 µg/m³, which is so low that preliminary source impact modeling for sources in the Bay Area with significant emissions of PM_{2.5} will in all likelihood result in at least one exceedance of the SIL.

Moreover, it is, at this time, unclear whether sources will be able to rely upon the SILs to demonstrate that they do not cause or contribute to a violation of the NAAQS, where violations are, in fact, already occurring or modeled to occur. EPA has voluntarily sought vacatur and remand of portions of its PM_{2.5} SILs rulemaking (specifically, 40 C.F.R. § 51.166(k)(2) and 52.21(k)(2)), “so that [EPA] may consider how to revise those provisions to ensure that SILs are not used in circumstances where a source’s impact may lead to a NAAQS or increment violation.”¹⁶ Until the ongoing litigation is finalized and EPA completes its anticipated reconsideration of these provisions, it is unclear whether SILs will even be available as a means of demonstrating compliance with the NAAQS where a violation already occurs or is projected to occur. Indeed, if the petitioner in that litigation were to succeed in its claims, even sources with emissions at all locations and times below the PM_{2.5} SILs could not be constructed in an area where the highest monitored concentrations sometimes exceed the NAAQS.

¹⁵ Final Rule, Prevention of Significant Deterioration (PSD) for Particulate Matter Less Than 2.5 Micrometers (PM_{2.5})—Increments, Significant Impact Levels (SILs) and Significant Monitoring Concentration (SMC), 75 Fed. Reg. 64864, 64866 (Oct. 20, 2010); *see also* Letter from Gina McCarthy, EPA Assistant Administrator, to Robert Ukeiley, at 2-3, *supra* at nt. 13 (considering revisions to Appendix W to account for secondary PM_{2.5} but also noting that the PM_{2.5} SILs were finalized in 2010).

¹⁶ *Sierra Club v. EPA*, No. 10-1413 (D.C. Cir.), Final Brief of Respondents (Jun. 26, 2012), at 34.

Ms. Carol Lee
Bay Area Air Quality Management District
October 26, 2012
Page 7 of 7

In light of the uncertainty associated with the ability to rely upon SILs and the likelihood that modeling for secondary PM_{2.5} formation will soon be required, the District's proposal of an unprecedented NAAQS compliance demonstration for nonattainment pollutants could act as a bar to new construction throughout portions of the Bay Area where the NAAQS is already or nearly exceeded, regardless of the *de minimis* contribution a source would make to such exceedances. Calpine does not believe this represents a sound technical or policy choice. Nor do we believe it is legally required to satisfy the requirements for an approvable NNSR, PSD and minor source permitting program. Accordingly, we strongly caution the District against finalizing proposed Regulation 2-2-308 and would recommend that it not be finalized at this time.

* * * *

Thank you for the opportunity to submit these comments. Please feel free to contact me at 925.557.2238 or barbara.mcbride@calpine.com with any questions.

Sincerely 



Barbara McBride

Director, Environmental, Health and Safety,
Western Region

cc: Alexander Crockett, Esq., Assistant Counsel
Jim Karas, Director of Engineering
Gregory Stone, Manager – Air Quality Engineer