



June 26, 2017

Greg Stone, Supervising Air Quality Engineer
Bay Area Air Quality Management District
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Dear Mr. Stone,

Thank you for the opportunity to review and provide comments on the Air District's proposed changes to Regulation 2. Permitting is the central function of the Air District, and the District's permitting actions set the limits of, and circumscribe the possibilities for, emissions control and protection of public health in the region.

General Comments

1. The proposed Permit Rules address greenhouse gases (GHGs) in the regulatory framework of the federal Prevention of Significant Deterioration (PSD) program. The usage of the PSD standard explicitly suggests that there is an allowable level that climate pollution may increase in the region. Yet the Air District's 2017 Clean Air Plan (CAP), *Spare the Air - Cool the Climate*, just adopted in April 2017, clearly shows that regional GHG emissions need to be reduced from about 85 MMT/year (in 2015) to about 15 MMT/year (Figure 3-9, p. 3/19) and lays out in detail (pp. 3/2-3/12) a range of grim present and future impacts that such pollution is having and will have on public health in the region.

A more accurate approach to regulation of GHGs would be to consider them non-attainment pollutants under New Source Review. Such a designation would make clear that we are grossly out of attainment with the GHG emission levels necessary for a two-thirds chance to hold climatic warming to 2°C and that the objective is to allow no further increases. A non-attainment approach would naturally lead the Air District to design a regulatory program to work toward achieving the necessary reductions, as described by the CAP and as directed by the Board when it adopted Resolution 2013-11:

NOW, THEREFORE, BE IT RESOLVED, The Board of Directors seeks to build on local, regional and state climate protection planning efforts by leading a regional climate protection planning process to include:

- o Setting a goal for the Bay Area region of reducing GHG emissions to 80% below 1990 levels by 2050, and developing specific performance objectives to track progress in achieving the goal; and
- o Developing a Regional Climate Action Strategy to guide and document the Air District's work towards achieving the 2050 goal for GHG emission reductions that complements existing planning efforts at the state, regional and local levels, utilizing the Air District's 2014 Clean Air Plan to coordinate the planning and outreach processes; and
- o Directing staff to develop a work program to guide and document the Air District's climate protection activities in the near term, to be approved by the Board of Directors in the first quarter of 2014.

Proposed Rules 2-1 and 2-2 do not adhere to Board and Air District commitments as expressed in both Resolution 2013-11 and the 2017 CAP just adopted. If the Air District moves forward without adopting a “no net increase” approach despite being so wildly out of attainment with the adopted GHG standard (again, see Figure 3-9 in the CAP), it exposes a lack of seriousness about doing its part to protect the global climate, as commanded in the Air District’s mission statement. Intellectual honesty requires the use of the non-attainment framework for GHG pollution, not the PSD standard.

2. It is indefensible that proposed Rule 2-1 retains the GHG exclusion in section 2-1-319-1. The Air District needs to set an appropriate threshold here for when GHG emissions from new and modified sources will become subject to permit requirements. We propose that threshold be set at 2,500 tons per year. Adding a calculation of GHG emissions to every permit evaluation is a minuscule change to workload.

Enhanced New Source Review (NSR) for Crude Slate Changes

1. While we certainly support increased Air District oversight of refinery crude slates, it seems clear that a change in crude slate by its very nature results in a change in emissions, and already meets the descriptions in 2-1-233 and 2-1-234 of a “physical change, change in the method of operation, or other similar change at an existing source that may affect air pollutant emissions.” Thus, a change in crude slate is already subject to Rule 2-1-233 or 2-1-234 as currently written. The fact that the Air District has not recognized this for refinery crude formulations before now is an oversight that needs to be corrected. The change needed is in Air District permitting procedure, not really the language of 2-1-233 or 2-1-234.
2. If a “significant” crude slate change is defined as one where the various crude composition metrics fall outside of three standard deviations from the mean, substantial changes in emissions may still occur without triggering Air District review. In a normal distribution, only the most extreme 0.3% of data fall outside this expansive range, with only 0.15% being on the high side. Even in non-normal distributions, Chebyshev’s inequality guarantees that no more than 11.2% of data should fall outside this range. We find this to be too permissive a standard—a two-sigma threshold would still provide for a very large amount of variability from the mean and should be employed. If facilities are able to make changes to their crude slates that change emissions, those changes should be reviewed and integrated into Air District regulatory priorities—period.
3. An appropriate first-stage approach would be for Air District engineering staff to expand the number of material codes for the refining process to include expected crude slate formulations and conservative estimates for Emission Factors associated with each of those crude slates. New emission factors can be added as new crude slate formulations are proposed for use. The identification of changes in upstream inputs, process-specific calculations, and resultant emission factors is all standard practice for how the Air District calculates and tracks emissions via the permitting process.
4. Air District staff stated in the June 12, 2017 workshop on these proposed changes that NSR was intended to ensure compliance with federal and state standards, however they made no mention of the Air District’s own GHG standards, as adopted in both Resolution 2013-11 and the 2017 CAP. Air District permitting actually needs to ensure compliance with its own policies.
5. In order for this program to have meaning going forward (i.e., to be able to determine whether a change in crude slate formulation triggers review as an alteration or a modification), baseline crude slate formulations need to be established for each refinery and expressed as reasonable permit limits based on historical operating assumptions.

Best Available Control Technology (BACT) for GHGs

1. Allowing GHG emission increases of 25,000 tons/year before BACT is triggered is far, far too permissive. Refineries already completed permitted hydrogen projects over the past few years that caused them to far exceed this threshold, and in all likelihood they will not engage in projects that surpass that level again going forward. In reality, a threshold of 25,000 tons/year will never be triggered. It is a meaningless number in practical terms. It also entirely overlooks small and medium-sized sources, even if they may cumulatively amount to a large emissions burden.

The Air District's Climate Protection Program dates back to 2005. In that time, the Air District has taken very little permit-related regulatory action on GHGs. It is long past time for the District to set a meaningful BACT threshold for GHG emissions. We propose that the threshold be set at 500 pounds per day. This threshold will not marginally increase the number of permits the Air District must issue, and the addition of GHG data is not burdensome. In addition, some high-quantity source categories are homogeneous and BACT analyses can be reproduced easily. By taking this approach, the Air District would be able to achieve potential reductions from small and medium-sized sources without an onerous permitting load.

Our GHG emissions are already far, far above what they need to be to prevent a range of catastrophic eventualities from besieging the region.

2. To what degree does a 25,000 tons/year BACT threshold miss opportunities to reduce GHGs that could be considered "low-hanging fruit," e.g., requiring a catalytic oxidizer instead of a thermal oxidizer, or banning diesel as a fuel for backup generators in favor of natural gas? Such steps would address diesel particulate matter and black carbon yet are overlooked in the proposed scenario. (We know diesel particulate filters don't perform in the real world like they do under test conditions. Actual emissions are higher than assumptions in permit evaluations.)
3. In reality, setting a low BACT threshold for GHGs is a minor change to Air District business, as most permit applications are routine. Changes to BACT determinations evolve very slowly. That said, setting a low programmatic BACT threshold allows for the newest information to be incorporated when it becomes available. These are opportunities not to be missed by deliberate program design. The overall success of reducing criteria air pollutants through knowledge gained via the minor NSR permitting program should be noted and replicated with GHGs fully incorporated into the minor and major NSR programs.
4. We were surprised and disappointed to hear Air District staff state in the June 12, 2017 workshop on these proposed changes that they were only considering carbon capture and efficiency improvements as BACT actions, with no provision at all for alternate technologies or fuel switching.

A low BACT trigger for criteria pollutants has resulted in slowing down emission increases, much greater attention being dedicated to finding opportunities for emission reductions, and identifying technologies later required by source-specific rulemaking. Fuel switching and energy storage need to become routine elements of engineering review of permit applications.

Conclusion

Serious action by the Air District to address our GHG pollution crisis on the front end—i.e., through its permitting program, is long overdue. Regulation 2 should be overhauled to provide a complete framework to regulate GHG emissions from new and modified sources. The permit program needs:

1. A GHG emission threshold to determine when a new or modified source requires permit evaluation;
2. A no-net GHG emissions increase program that assures impacted communities are not burdened with increased emissions; and
3. A regulatory requirement to require review of clean energy alternatives and fuel switching to proposed new and modified sources and abatement devices.

The threshold for triggering NSR should be lowered from a three-sigma to a two-sigma standard, and the threshold for BACT should be set low enough to include small and medium-sized sources that may provide substantial cumulative emission reductions.

Sincere regards, on behalf of 22,000 members of 350 Bay Area,

Jed Holtzman
Senior Policy Analyst