BAY AREA AIR QUALITY MANAGEMENT DISTRICT

UPDATES TO BAAQMD NEW SOURCE REVIEW AND TITLE V PERMITTING PROGRAMS REGULATION 2; RULES 1, 2, 4, AND 6

(INCORPORATING STATIONARY SOURCE CONTROL MEASURE SSM-16)

FINAL STAFF REPORT

SEPTEMBER 26, 2012

ACKNOWLEDGEMENTS

The Proposed Amendments to the New Source Review and Title V permitting regulations of the Bay Area Air Quality Management District that are addressed in this Staff Report are the result of the collaborative efforts of many District staff members and consultants, with input from representatives of the regulated community and of environmental organizations, representatives of other governmental agencies, interested members of the public, and others. Air District Staff wish to acknowledge the participation of all those who took part in the development of these Proposed Amendments and to thank them for their input.

The District rule development team with primary responsibility for drafting the Proposed Amendments, and this Staff Report, included the following District staff members:

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I. EXECUTIVE SUMMARY

Staff of the Bay Area Air Quality Management District (Air District or District) are proposing amendments to the Air District's "New Source Review" (NSR) and "Title V" permitting programs. The New Source Review and Title V programs are important air pollution permitting programs that the Air District implements under the federal Clean Air Act and California's clean air laws. Air District Staff are proposing updates to these permitting programs to reflect recent regulatory developments, as well as to enhance and strengthen the programs' effectiveness. This Staff Report provides a detailed explanation of the Proposed Amendments and the reasons why they are necessary.

The Air District's NSR and Title V programs that are the subject of the Proposed Amendments are set forth in District Regulation 2. The New Source Review program is contained in Regulation 2, Rule 2, along with additional provisions in Regulation 2, Rule 4 that help implement the program's emission "offsets" requirements. The Title V program is contained in Regulation 2, Rule 6. Both programs also rely on provisions in Regulation 2, Rule 1, which contains general requirements applicable to all District permitting. The Proposed Amendments make revisions to these four Rules in Regulation 2. The permitting programs involved are described in greater detail in Section II of this Staff Report.

Air District Staff have developed these Proposed Amendments to update the District's NSR and Title V programs to address a number of recent regulatory developments. The principal revisions to the District's current permitting rules that will be made to address these recent developments include the following:

- **ADDING NSR PERMITTING REQUIREMENTS FOR FINE PARTICULATE MATTER ($PM_{2.5}$).** First, the District needs to incorporate new federal requirements for fine particulate matter (particulate matter with a diameter of less than 2.5 microns, or "$PM_{2.5}$") into its NSR permitting program. In 2009, EPA designated the San Francisco Bay Area as "non-attainment" of the National Ambient Air Quality Standard for short-term (24-hour average) $PM_{2.5}$ concentrations. Although more recent data show that $PM_{2.5}$ concentrations are now below that standard, the region remains administratively designated as "non-attainment" by EPA. The District is taking a number of steps to address this situation, including preparation of a $PM_{2.5}$ "Clean Data Finding" for EPA's review that addresses this more recent air quality data. Adding $PM_{2.5}$ requirements to the District's NSR program is another measure that the District must take to address the $PM_{2.5}$ "non-attainment" designation. The District committed to updating its NSR program to add $PM_{2.5}$ requirements as part of Stationary Source Measure No. 16 (SSM-16) in its 2010 Clean Air Plan (CAP). The Proposed Amendments will add $PM_{2.5}$ to the category of pollutants that are regulated under the NSR program.
- **ADDING PERMITTING REQUIREMENTS FOR GREENHOUSE GASES.** Second, the District needs to incorporate new federal requirements for greenhouse gas (GHG) permitting. In 2011, EPA began regulating GHGs under the Clean Air Act, which means that GHG emission sources are subject to NSR and Title V requirements. The Air District needs to address this situation and ensure that its NSR and

Title V permitting programs adequately cover GHGs. The Proposed Amendments will add GHG permitting requirements so that GHGs are explicitly included in the District's permitting programs.

- **Adopting a District "Prevention of Significant Deterioration" Permitting Program for EPA Approval.** Third, the District needs to obtain EPA's approval of its "Prevention of Significant Deterioration" regulations. Prevention of Significant Deterioration, or "PSD", is an important component of federal NSR permitting. For historical reasons, the District has never had an EPA-approved PSD program. Instead, EPA has had to step in and administer PSD permitting in the Bay Area under its own federal regulations. Air District Staff have come to realize that this situation is unworkable, because it means that facilities in the Bay Area are subject to a confusing system of overlapping regulations – District regulations for most aspects of NSR permitting, but federal regulations for the PSD element – that are oftentimes similar but are not identical in every circumstance. The result has been confusion that has led to delays, inconsistency, and sometimes even litigation over exactly what regulatory requirements apply in specific situations. To address this concern, the Proposed Amendments will adopt PSD requirements into the District's regulations, which EPA can then approve as effective for PSD permitting in the Bay Area.

- **Miscellaneous Other Updates to Strengthen NSR and Title V Permitting.** Fourth, in addition to these recent regulatory developments, Air District Staff have identified a number of other areas in which the District's current NSR and Title V programs could be improved to make them more effective. Some of these updates are also legally compelled by EPA's requirements for these programs under the federal Clean Air Act. These additional updates include:
  - Revising the NSR applicability test for modifications to existing sources to address a change in EPA policy on how "modifications" must be defined.
  - Adding a "NAAQS Protection" modeling requirement, which will require NSR permit applicants to demonstrate through air quality modeling that they will not cause or contribute to an exceedance of the National Ambient Air Quality Standards.
  - Expanding the public notice and comment requirements for NSR permits so that interested members of the public will have a greater opportunity to get involved in permitting decisions.

  Although the District's current permitting programs are already very comprehensive and robust, these revisions will help strengthen them even more and ensure that they fully comply with all legal requirements.

- **Non-Substantive Language and Organizational Revisions to Improve Readability.** Fifth, the Proposed Amendments also include a number of non-substantive changes to the language and structure of the current regulations. The regulations have become opaque and unclear in some places as they have evolved over the years, with the result that it can be difficult for regulated entities, members of the public, and even Air District staff to understand exactly what the regulations require in practice. The Proposed Amendments reorganize a number of the regulatory provisions involved in these programs – and in particular the NSR program – and revise the language that is used in them to make it clearer and easier to understand. These changes do not

alter the substantive requirements of these permitting programs in any way. (The areas where the Proposed Amendments make substantive changes are those summarized above.) But they do make important changes in the way the regulations are written and presented to ensure that they can more easily be implemented by all who will use them.

This Staff Report provides a detailed background discussion of the reasons for the Proposed Amendments. The remainder of the Report is organized as follows. Following this Executive Summary, Section II provides a brief review of the purposes of the NSR and Title V permitting programs and how they work in practice. Section III then reviews the recent regulatory developments that require the Air District to update these programs. Section IV provides a detailed analysis of the specific provisions that are affected by the Proposed Amendments, explaining how the Proposed Amendments will affect each provision and the reasons why an amendment is necessary. The Report then addresses environmental and regulatory impact analyses in Section V, including the Environmental Impact Report that has been prepared for the Proposed Amendments under the California Environmental Quality Act. Section VI provides an overview of the public outreach and participation process that District Staff undertook to engage interested members of the public (including industry representatives and environmental organizations) in the development of these Proposed Amendments.

In addition to this Staff Report, Air District Staff have also published a number of other explanatory documents during the rule development process to present the basis for and intent behind the Proposed Amendments. District Staff published these documents to explain for interested members of the public why the District was developing updates to its NSR and Title V programs and to respond to comments that were received on various issues that were raised by the public. These documents are discussed further in Section VI, and they are incorporated herein by reference regarding the regulatory intent underlying the development of the Proposed Amendments.

II. BACKGROUND ON NEW SOURCE REVIEW AND TITLE V PERMITTING

This section provides a brief overview of the New Source Review and Title V permitting programs, and of the legal framework that underlies them.

A. Overview of New Source Review and Title V: Comprehensive Permitting Programs For Stationary Sources of Air Pollution

In order to understand the context in which these Proposed Amendments arise, it is important to understand the purposes of the Air District's NSR and Title V permitting programs and how they operate. The following discussion outlines these important regulatory programs.

1. What Are New Source Review and Title V Permits?

"New Source Review", or NSR, is a pre-construction permitting review requirement that ensures that when a new source of air pollution is built, or when an existing source is modified, the source will implement effective emission control technology and will comply with related regulatory requirements pertaining to air emissions. NSR is primarily aimed at ensuring that the region's air will comply with air quality standards that have been established to ensure that concentrations of pollutants in the ambient air we breathe remain at safe and healthful levels – the National Ambient Air Quality Standards, or "NAAQS". In addition, the program also addresses other pollutants for which NAAQS have not yet been adopted. NSR permitting focuses on projects at the design stage, before construction on the source begins, where it easiest and most appropriate to incorporate effective pollution control technology (as opposed to having to retrofit a source after it is built). Based upon this pre-construction review, the District issues an "Authority to Construct" for the source, which authorizes construction and imposes permit conditions to ensure that the source satisfies all applicable regulatory requirements. The Air District's New Source Review permitting program is contained in District Regulation 2, Rule 2 (with certain additional elements in Regulation 2, Rule 4).

NSR and Title V are comprehensive permitting programs that apply to all stationary sources in the Bay Area that emit more than specified threshold amounts of regulated air pollutants.

Title V permits, by contrast, are operating permits. Instead of applying pre-construction like New Source Review permits, the Title V permit requirement – also known as "Major Facility Review" – applies after a source is constructed and begins operating. Title V permitting does not impose any new substantive requirements on sources; the

substantive requirements to limit emissions are imposed through the pre-construction New Source Review permitting process, through the emissions standards and limitations in the District's regulations, and through other applicable legal requirements. Instead, Title V permits compile all of these substantive requirements in one single document to improve enforceability, implementation, and transparency. The Title V permit thus becomes an important regulatory document covering the facility's operation, providing facility operators, District inspectors, interested members of the public, and others with a single location to readily access all of the legal requirements to which the facility is subject. In this way, Title V permits aid in enhancing the enforceability of air quality requirements, in ensuring compliance with such requirements by the facility, and in providing transparency to the public in how air quality regulations are being implemented. The District's Title V Major Facility Review permitting program is contained in Regulation 2, Rule 6.

2. What Types of Facilities and Sources are Regulated Under These Permit Programs?

Unlike many District regulations, which are aimed at specific types of operations at specific types of facilities (e.g., boilers at petroleum refineries, gasoline dispensing nozzles as gas stations, gas turbines at power plants, etc.), the New Source Review and Title V permitting programs apply to all sources at all facilities that are large enough to exceed the programs' applicability thresholds. These permitting programs therefore affect a wide variety of sources and facilities throughout the San Francisco Bay Area.

The federal New Source Review and Title V permitting programs have been developed to apply primarily to "major" facilities, which are generally facilities with the potential to emit over 100 tons per year of regulated air pollutants.[1] This is a fairly high threshold in most instances, corresponding to large industrial facilities such as refineries, power plants, or large factories. There are currently approximately 100 such "major" facilities in the Bay Area.

Under California law and District regulations, however, several important elements of New Source Review permitting are applied at much lower thresholds. The District implements one of the most important requirements of the New Source Review program – the requirement to use the "Best Available Control Technology" (BACT) to control air emissions – for all sources that emit 10 pounds per day or more of certain important air pollutants. The District implements another important NSR requirement – the requirement to "offset" any new emissions increases through shutdowns of existing sources elsewhere to ensure an overall no-net-increase in emissions from such sources – at facilities that emit 10 tons per year or more of ozone precursors. These applicability thresholds are considerably lower than the 100 ton-per-year "major" facility threshold, and so the requirements apply to a much

[1] The "major" facility threshold is 100 tons per year in most instances, although in certain circumstances a different threshold applies. For example, for certain types of facilities a 250-ton-per-year threshold is used for PSD. The major facility thresholds are discussed in more detail in Sections II.B. and IV.B.2. below. In addition, the federal NSR program requires permitting for facilities below the "major" facility threshold – which EPA calls "minor NSR" permitting – but the important substantive requirements of the federal NSR program apply to these "major" facilities. This Staff Report refers to the federal NSR program to mean the requirements applicable to major facilities, except where specifically noted.

larger category of facilities than the "major" facilities noted above. There are approximately 8,000 operations in the Bay Area that are subject to such permitting requirements.

The Proposed Amendments will update the NSR and Title V permitting programs, and so they could potentially affect any or all of these facilities. Many aspects of these permitting programs are not being changed, however, so for many of these facilities they will not actually see any change in how the regulations apply to them. How the Proposed Amendments will affect any particular facility will depend on the facility's specific circumstances.

3. What Types of Air Pollution Are Regulated Under These Permit Programs?

New Source Review and Title V are comprehensive permitting programs that apply to a broad range of air pollutants.

The New Source Review program is primarily aimed at helping to attain and maintain the National Ambient Air Quality Standards – or "NAAQS" – and so most aspects of this program apply to pollutants for which such Standards have been established. These include ozone (which is addressed by regulating its precursors, NOx and VOC), particulate matter, carbon monoxide, sulfur dioxide, and others. In addition, the program also applies to a number of other regulated air pollutants for which NAAQS have not been established, such as hydrogen sulfide and sulfuric acid mist. Greenhouse gases have also recently been added by EPA to the pollutants regulated under New Source Review. New Source Review does not apply to hazardous air pollutants, however. These are addressed under a number of other federal, state and District regulatory programs – including the District's air toxics permitting program in District Regulation 2, Rule 5, and other regulatory initiatives as discussed in the next section – but they are not part of the New Source Review program.

The Title V program applies to all of the pollutants regulated under New Source Review, as well as to hazardous air pollutants. As noted above, the purpose of the Title V program is primarily procedural in nature. Title V permitting helps to improve enforceability, implementation and transparency by collecting all applicable air quality requirements into a single permitting document so that they are easily accessible by facility operators, Air District staff, interested members of the public, and others. Title V permitting therefore encompasses all different types of air pollutants of concern that a facility could emit. A full description of all of the different types of air pollutants covered by the District's Title V program is set forth in District Regulation 2-6-222.

4. What Do These Permit Programs Require of Regulated Facilities?

For facilities that are subject to the NSR permitting requirements, the program requires them to obtain an "Authority to Construct" from the Air District before installing a new source or making a modification to an existing source at the facility. To obtain the Authority to Construct, the applicant must undergo a pre-construction review process to ensure that it will comply with applicable regulatory requirements. In summary, the principal elements of this pre-construction NSR review process include the following requirements:

- All sources with emissions over 10 pounds per day must implement the "Best Available Control Technology" to control their emissions;
- Facilities with emissions over 10 tons per year of NOx and VOC and 100 tons per of particulate matter and SO_2 must "offset" any new emissions increases with emission reductions elsewhere to ensure a "no-net-increase" in these pollutants;
- For other pollutants, facilities must conduct computer modeling of their emissions to evaluate the impact that the emissions would have on ambient concentrations of air pollutants, and based on that analysis must demonstrate that the emissions would not cause or contribute to a violation of air quality standards;
- All facilities must comply with important procedural requirements such as notice to interested members of the public and the opportunity for them to comment on proposed permitting decisions.

For facilities subject to the Title V requirements, the program requires them to obtain a Title V permit to operate through a comprehensive public process. This process is designed to bring transparency to how major facilities are permitted and how they ensure that they are complying with air quality requirements. The Title V permitting process involves identifying all applicable requirements; ensuring that the facility is adequately monitoring its compliance status with respect to all such requirements; ensuring that the facility is in fact complying with all such requirements; and compiling all of the applicable requirements into a single permitting document, with notice to, and an opportunity to comment by, interested members of the public.

The specifics of what these permitting programs require are discussed further in Section II.B., which outlines the regulatory framework under which the District implements the programs; and in Section IV, which goes through the major elements of these programs in detail in connection with each individual revision included in the Proposed Amendments.

5. How Do These Permit Programs Relate to Other District Regulatory Programs?

New Source Review and Title V are very broad permitting programs, applying to a wide variety of sources and emissions. But they are only part of the comprehensive system of federal, state, and District regulations that govern air pollution from stationary sources in the San Francisco Bay Area.

In addition to these two general permitting programs, the District also has other permitting requirements in Regulation 2 such as the Toxics New Source Review permitting requirements in Regulation 2, Rule 5. This permitting program is aimed at reducing toxic health risks from stationary sources. It requires the use the Best Available Control Technology to reduce toxic health risks from sources above the applicable thresholds, and prohibits such sources altogether if the health risks would be too high. The Toxics New Source Review program acts as an important adjunct to the New Source Review program in Regulation 2, Rule 2, which does not cover hazardous air pollutants as noted above.

Beyond the permitting programs in Regulation 2, the District also has a number of specific regulatory requirements in its other rules that apply to air pollution from stationary sources. These range from restrictions on certain types of activities, such as open burning (Regulation 5) or wood burning in fireplaces (Regulation 6, Rule 3), to emissions limits on particular types of equipment and facilities, such as commercial cooking equipment (Regulation 6, Rule 2) or boilers and heaters at petroleum refineries (Regulation 9, Rule 10). These regulations create industry-specific or activity-specific regulatory standards that affected facilities and sources must comply with to reduce air pollution.

There are also a number of state and federal requirements that the District implements for sources in the Bay Area. Examples include Airborne Toxics Control Measures (ATCMs) adopted by the California Air Resources Board to address toxic health risks from air pollution, and federal New Source Performance Standards and National Emissions Standards for Hazardous Air Pollutants adopted by the federal Environmental Protection Agency.

All of these regulatory requirements apply to stationary sources in the Bay Area to create a comprehensive system to address all types of air pollution. The District implements these regulatory requirements by issuing permits to facilities stating how the requirements apply to each individual source, and by inspecting such facilities to ensure that they are complying with all regulatory requirements and permit conditions. The New Source Review and Title V permitting programs are essential elements in this comprehensive system – although by no means the only elements.

Finally, in addition to these regulatory requirements aimed specifically at air pollution, there are also other general environmental requirements that encompass air quality concerns, such as the California Environmental Quality Act (CEQA). CEQA applies any time a governmental agency grants a discretionary permit or other authorization for a development project. It requires the agency to consider whether there would be any significant adverse environmental impacts from the project, and to disapprove the project unless any such impacts can be mitigated or there are significant overriding considerations that weigh in favor of approving it. This requirement is normally implemented by a governmental agency of general jurisdiction such as a city or county, although in some cases the District implements it where there is no other agency involved in the permitting of the project.

All of these requirements work in concert to protect and improve air quality in the Bay Area by regulating emissions from stationary sources.[2] New Source Review and Title V permitting are important elements in this regulatory tapestry to ensure that all potential air pollution concerns are addressed in an appropriate and health-protective manner.

[2] In addition to the Air District's regulatory efforts, the agency also works to improve air quality through non-regulatory efforts such as grants and incentives to encourage voluntary emission reductions, educational initiatives to help members of the public understand how they can help achieve clean air through their own healthy choices, and other similar efforts.

6. Why Are Updates To These Permitting Programs Necessary At This Time?

The District's NSR permitting rule has not been updated since 2005, and its Title V permitting rule has not been updated since 2006. There have been a number of technical and regulatory developments that have taken place since that time. As a result, the Air District needs to revise its regulations to bring them up to date. These recent regulatory developments are summarized in more detail in Section III below, as well as in Section IV in connection with the specific regulatory provisions that are being amended to address them.

B. Regulatory Framework for New Source Review and Title V Permitting Requirements

The New Source Review and Title V permit programs are governed by a number of federal and state requirements that specify certain minimum requirements for what the programs must contain. The District's New Source Review and Title V regulations – and the amendments that Staff are now proposing – must satisfy all of these requirements, and the Air Resources Board and EPA will be reviewing them to ensure that they comply with all such requirements. These requirements therefore form an important legal backdrop for the proposed amendments. In order to understand the context for the proposed amendments is it necessary to understand these legal requirements. The following discussion describes this legal framework in more detail.

1. "Cooperative Federalism": The Overlapping System of Federal and State Regulation of Air Quality

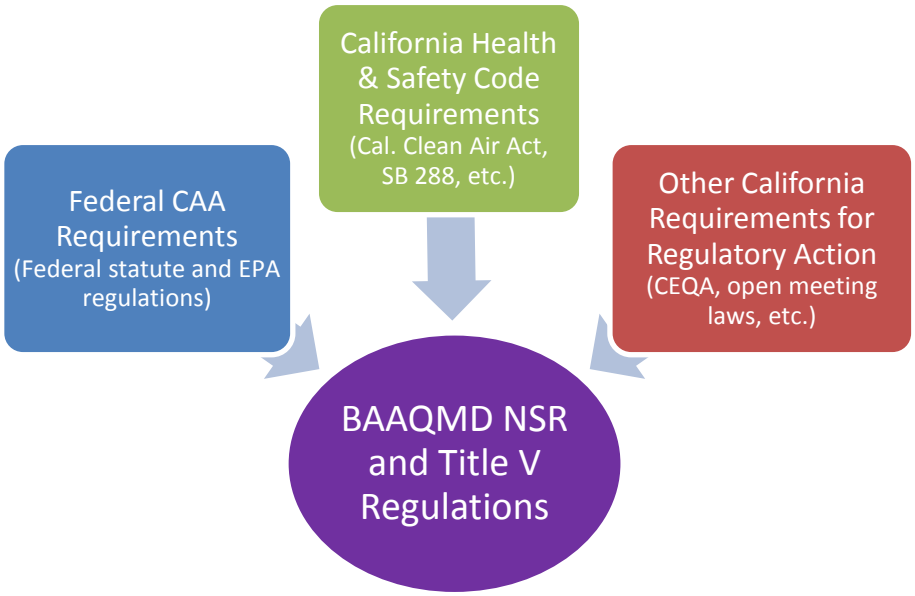
Both the New Source Review and Title V permitting programs have their origin in the federal Clean Air Act, but they are implemented by the District under state law. That is, the District implements these federal requirements for air pollution sources in the Bay Area through regulations that the District adopts under the legal authority granted to it under the California Health and Safety Code, a state law. In order to understand how these regulatory requirements are implemented, it is necessary to understand how this overlapping system of state and federal action – which is often referred to as "cooperative federalism" – works.

In the Clean Air Act, the United States Congress established certain minimum permitting requirements that it wanted to see implemented in all areas throughout the country. The federal Clean Air Act therefore requires that major stationary sources of air pollutants cannot be built or operated without permits that satisfy the Act's requirements. But Congress envisioned that the states would take the lead in implementing these requirements and would adopt their own permitting programs under state law to do so. Congress intended that the states would use their own regulatory powers under state law to establish state-law permitting programs that meet the minimum requirements set forth in the Clean Air Act. EPA would then review these state-law permitting programs to ensure that they were sufficiently stringent, and then would approve them as satisfying the Act's minimum requirements. Once EPA has approved a state's program, the state then implements the Act's requirements through that program,

and permits issued by the state agency under that program satisfy the federal legal requirements in the Clean Air Act.

This cooperative system provides a number of benefits. One benefit to having the states implement these permitting programs is that it relieves the federal EPA of the burden of having to do so all across the country. EPA simply does not have the personnel and resources to administer permits for every regulated source throughout the United States, and so it makes sense administratively to have state regulatory agencies administer the permits for sources in their state. Another benefit is that the states can tailor their permitting programs to their own individual needs. Each state can design its own permitting program as it sees fit, and can make it more stringent than the federal minimum requirements if it so desires, as long as it satisfies the Clean Air Act's minimum standards. These attributes have made the "cooperative federalism" model a successful regulatory policy tool.

Under our federal system, Congress cannot require the states to adopt a particular type of regulatory program, as that would impermissibly infringe on the states' sovereignty to decide for themselves on what their own state laws should require. Thus, the Clean Air Act technically does not *require* the states to implement these permitting programs.[3] Instead, it uses a number of "carrots" and "sticks" to encourage the states to do so. States are eligible for federal highway funds if they cooperate and develop permitting programs to implement the Clean Air Act; if they do not, they can lose federal highway funding, and EPA will step in and implement even more stringent regulatory requirements for sources in the state.



The Air District must satisfy multiple state and federal legal requirements in adopting or amending NSR and Title V permitting requirements.

The states have therefore cooperated, and for the most part they have developed their own programs to implement these requirements – both because of the carrots and sticks built into the Clean Air Act, and also because they support the air quality goals embodied in these Clean Air Act programs. In the event that a state is unwilling or unable to adopt its own state permitting program, EPA can step in and implement the permitting programs itself. In such cases, covered sources must apply to EPA for a

[3] *See Brown v. EPA*, 521 F.2d 827 (9th Cir. 1975).

federal permit, which EPA issues under federal permitting rules set forth in the Code of Federal Regulations. There is one element of the Clean Air Act's permitting requirements relevant to this rulemaking – known as "Prevention of Significant Deterioration" – that is currently implemented federally by EPA in the Bay Area. This situation is addressed in more detail below, and one goal of the proposed amendments to obtain EPA approval of the District's permitting program in this area so this element will be implemented by the District and not EPA.[4]

In developing its permitting programs, the District is therefore governed by a number of important and overlapping legal requirements. The District is the agency that implements the federal permitting requirements of the Clean Air Act, as fleshed out in more detail in EPA's implementing regulations, and so it must ensure that its regulations satisfy those requirements, at a minimum. The District is also a state agency subject to the requirements established by the California Legislature in the Health & Safety Code – as well as by the California Air Resources Board in its implementation and oversight role – and so it must ensure that its regulations satisfy those requirements as well. With this background in mind, the remainder of this discussion of the legal framework for the proposed amendments focuses in detail on the various federal and state requirements applicable to the District's NSR and Title V permitting programs.

2. "New Source Review" (NSR) Permitting

The first permit program that the District is addressing in this rulemaking project is the "New Source Review", or "NSR", program. As noted above, the NSR program focuses on ensuring compliance with the National Ambient Air Quality Standards (NAAQS). For pollutants where current air quality exceeds these established standards, New Source Review is directed at ensuring that any new development will not interfere with efforts to reduce air pollution to healthy levels. For pollutants where current air quality meets these standards, New Source Review focuses on ensuring that new development does not degrade air quality to the extent that the standards may be violated. The program also aims to minimize emissions of other air pollutants for which no standards have yet been established.

The New Source Review program applies these requirements to new sources, and to modifications or expansions of existing sources that will increase air emissions. When a new source or modification is built of sufficient size to exceed the NSR applicability thresholds, it is required to implement stringent emissions control requirements. The requirements are outlined below.

[4] Failure by a state agency to have an approved "Prevention of Significant Deterioration" program does not trigger the sanctions described above that apply for other elements of Clean Air Act permitting where a state does not develop its own permitting program. The Bay Area has therefore not been subject to sanctions historically for failure to have an EPA-approved program in this area, which is one reason why this situation has existed thus far. The District has found that not having an EPA-approved PSD program has led to a number of problems with implementation, however, as described below, which is why staff are now recommending that the District adopt a PSD program and seek to have it approved by EPA.

a) Federal NSR Requirements

New Source Review was created under the federal Clean Air Act and is primarily driven by federal requirements, although there are also a number of important additional state-law requirements that apply. This section addresses the federal requirements that apply to New Source Review. The additional state-law requirements are addressed in Section II.B.2.b. below.

i. The Distinction Between "Non-Attainment" Areas and "Attainment" Areas

The federal NSR permitting program makes an important distinction between (1) pollutants for which the region is in "attainment" of the federal air quality standards, and (2) pollutants for which the region is "non-attainment" of the federal air quality standards. For a pollutant for which the region is in "attainment" of the federal standard, that means that the concentrations of that pollutant measured in the ambient air around the region are lower than the maximum healthy levels established by EPA as "National Ambient Air Quality Standards" (NAAQS) for that pollutant. For a pollutant for which the region is in "non-attainment", that means that the concentrations of that pollutant measured in the ambient air in the region exceed the NAAQS for that pollutant.[5] The Bay Area is currently designated as non-attainment for ozone (smog) and for the short-term standard for $PM_{2.5}$. The Bay Area is currently designated as attainment for all other NAAQS.[6]

The federal NSR permitting program imposes somewhat more stringent requirements for non-attainment areas, in recognition of the fact that these areas need to implement more ambitious efforts to reduce emissions and bring the area into compliance with the NAAQS. In attainment areas – those where the air quality does not exceed the NAAQS – the requirements are somewhat less stringent, although they are still substantial because it is important to remain proactive even in cleaner areas to ensure that the air quality does not deteriorate to the point where pollution exceeds the NAAQS. The element of the permitting program that applies for non-attainment pollutants is called "Non-Attainment NSR", while the element that applies in attainment areas is called "Prevention of Significant Deterioration" (PSD), which recognizes the emphasis on ensuring that air quality is not degraded in these cleaner areas.[7]

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[5] Note that multiple NAAQS have been established for some pollutants, and so it is possible to be in attainment of one NAAQS and non-attainment of another NAAQS for the same pollutant. This is the situation in the Bay Area with respect to fine particulate matter ($PM_{2.5}$). There are two NAAQS for $PM_{2.5}$, a short term standard that applies to $PM_{2.5}$ concentrations averaged over any one-hour period and a long-term standard that applies to $PM_{2.5}$ concentrations averaged over an entire year. The Bay Area is in attainment of the long-term (annual) standard, but is designated as non-attainment of the short-term (24-hour) standard.

[6] For a few of the NAAQS, the Bay Area is technically designated as "unclassified" meaning that EPA has not been able to make an attainment or non-attainment designation based on available air quality data. For New Source Review purposes, unclassified areas are treated in the same manner as attainment areas. This Staff Report therefore refers to both attainment and unclassified designations simply as "attainment".

[7] The PSD requirements also apply to regulated air pollutants for which EPA has not established NAAQS, such as greenhouse gases. (EPA has recently started regulating greenhouse gases because of their impact on global climate change, but it has not established any health-based NAAQS for the maximum amount of greenhouse gases in the

ii. "Non-Attainment NSR" for Non-Attainment Areas

The requirements for Non-Attainment NSR permitting for major sources are set forth in Section 173 of the Clean Air Act, with further more detailed requirements specified in EPA's implementing regulations in 40 C.F.R. Section 51.165. The principal elements of Non-Attainment NSR are the following:

- Lowest Achievable Emissions Rate (equivalent to "California BACT"): The Clean Air Act's Non-Attainment NSR provisions specify that NSR permits must require new and modified sources to achieve the "Lowest Achievable Emissions Rate", or "LAER", for their emissions of non-attainment pollutants. This requirement is specified in CAA Section 173(a)(2). This level of control is effectively the most stringent control technology or emissions limitation that has been successfully implemented at other facilities of the same type as the one being permitted; or which can be feasibly and cost-effectively implemented at the facility, even if it has not yet been implemented elsewhere.

  California law requires a similar level of emissions control that it calls "Best Available Control Technology", or "BACT". This level of control is often called "California BACT", to distinguish it from the level of control that EPA requires for emissions of attainment pollutants under the PSD program, which EPA also calls "BACT". The requirement for non-attainment pollutants is that they use a level of pollution control technology that constitutes LAER/California BACT; for attainment pollutants, PSD permitting requires federal BACT as discussed below, which is a slightly less stringent level of control.

- Emission Offsets: Non-Attainment NSR also requires that new and modified sources obtain emission reductions from existing sources to counter any new emissions increases from the new or modified source. These emission reductions from existing sources "offset" the new emissions so that will not hinder the region's efforts to reduce emissions and bring air quality back into attainment of the NAAQS. This requirement is specified in CAA Sections 173(a)(1)(A) and 173(c).

- Compliance Certification: Non-Attainment NSR also requires that the permit applicant for a new or modified source must certify that all of the facilities that it owns in California are in compliance with all applicable air quality regulatory requirements. This requirement is specified in CAA Section 173(a)(3).

- Alternatives Analysis: Non-Attainment NSR also requires that the applicant must demonstrate that the benefits of the proposed new or modified source outweigh any environmental and social costs that would result from its location, construction or modification. This requirement is specified in CAA Section 173(a)(5).

- Public Notice and Comment Opportunity: Finally, Non-Attainment NSR requires that the public must be notified before any permit is issued for a new or modified source and must be given an opportunity to comment on and provide input into the permitting decision. The notice-and-

air that we breathe.) For pollutants for which EPA has not established a NAAQS, a region cannot by definition be non-attainment of a NAAQS for that pollutant.

comment requirements applicable to Non-Attainment NSR permitting are set forth in EPA's regulations in 40 C.F.R. section 51.161.

The San Francisco Bay Area is "non-attainment" for ozone and $PM_{2.5}$, and so these requirements apply for "major" facilities in the Bay Area (i) to NOx and VOC as precursors to ozone formation; and (ii) to directly-emitted $PM_{2.5}$ and to NOx and SO_2 as precursors to secondary $PM_{2.5}$ formation.[8] The District has long had a Non-Attainment NSR permitting program, set forth in Regulation 2, Rule 2, which has been approved by EPA as satisfactorily implementing all of these federal requirements for Non-Attainment NSR. The current Proposed Amendments will update the District's Non-Attainment NSR program to add $PM_{2.5}$ in response to the $PM_{2.5}$ non-attainment designation. How the Proposed Amendments will satisfy all of the applicable Non-Attainment NSR requirements is discussed in detail in Section IV.B.1. below. Once the revised Non-Attainment NSR provisions are adopted, the District will submit them to EPA (through the Air Resources Board) for approval under the Clean Air Act.

iii. "Prevention of Significant Deterioration" (PSD) for Attainment Areas

The general requirement for PSD permitting for attainment pollutants is set forth in Section 165 of the Clean Air Act. The detailed requirements for how PSD programs must be implemented are specified in EPA's regulations in 40 C.F.R. Section 51.166, however. The principal elements required for PSD permitting are the following:

- "Best Available Control Technology" ("federal BACT"): PSD permitting must require new and modified sources to implement the Best Available Control Technology for their emissions of attainment pollutants. This level of control technology – which is referred to in the District's NSR program as "federal BACT" – is somewhat less stringent than the federal LAER/California BACT level of control referred to above, in recognition of the fact that where the region is in attainment of the NAAQS for a pollutant the need for stringent emissions controls is not quite as important. The principal difference between LAER/California BACT (for non-attainment pollutants) and federal BACT (for attainment pollutants) is that federal BACT always incorporates a cost-effectiveness element. LAER/California BACT requires that a facility must utilize a control technology whenever it has been successfully implemented at a similar operation, even if it may be very costly for that particular facility. Federal BACT allows the facility to use a less effective control technology in that situation, if the more stringent technology would not be cost-effective. The PSD BACT requirement is set forth in 40 C.F.R. Section 51.166(j).
- Air Quality Impact Analysis (and related analyses): PSD does not require "offsets" for new emissions increases, as is required for Non-Attainment NSR. For PSD pollutants, the region is by

[8] In addition, the District has historically applied some of these Non-Attainment NSR requirements to other pollutants such as carbon monoxide, even though the Bay Area is not currently "non-attainment" of the NAAQS for these pollutants. The Proposed Amendments do not relax this level of regulation for carbon monoxide for a number of reasons, most importantly because such a relaxation would be prohibited by state law under SB 288. For more information on the SB 288 prohibition on relaxation of existing NSR requirements, see Section II.B.2.b.ii. below.

definition not in violation of the NAAQS, and so it can allow a certain amount of additional emissions without exceeding the health-based air quality standards. To ensure that any such increases do not jeopardize compliance with the NAAQS, however, PSD requires an analysis of the impacts that the emission increases will have to ensure that they will not cause or contribute to a NAAQS exceedance. In addition, the analysis must show that the increases will not consume an air quality "increment", which is an increase in air pollutant concentrations that would constitute impermissible "significant deterioration" in air quality. PSD also requires an analysis of whether such increases will adversely affect visibility, soils or vegetation in the region; and any air-quality related values in areas of special environmental value such as National Parks (called "Class I Areas"). These impact analysis requirements are set forth in 40 C.F.R. Sections 51.166(k)-(p).

- Public Notice and Comment Opportunity: As with Non-Attainment NSR, PSD also requires that the public must be notified before any permit is issued for a new or modified source and must have an opportunity to provide input on the permitting decision. The notice-and-comment requirements for PSD permitting are set forth in 40 C.F.R. Section 51.166(q).

Unlike with Non-Attainment NSR, the District has never had an approved PSD permitting program.[9] Instead, PSD permitting for sources in the Bay Area has always been done under the federal PSD program, implemented through EPA's regulations in 40 C.F.R. Section 52.21. PSD permits for sources in the Bay Area are therefore federal permits issued under the authority of the federal Clean Air Act and EPA's federal regulations – not District permits issued under the District's authority under the California Health & Safety Code and District regulations. EPA's federal program has a provision allowing for EPA to delegate administration of federal PSD permits to local agencies, however, and EPA has exercised this power and has delegated its authority to administer the federal PSD program to the District for sources in the Bay Area (with certain exceptions). Thus, for most sources, the District now processes and issues federal PSD permits on EPA's behalf, using EPA's regulations, as EPA's delegatee. As EPA's Environmental Appeals Board has described this delegation situation, the District acts as the federal permitting authority for PSD purposes and issues the federal PSD permit "standing in the shoes" of EPA.[10]

One of the primary purposes of the Proposed Amendments is to adopt a PSD program in the District's regulations for approval by EPA. Once EPA approves the District's program, the District will be able to issue its own permits under Regulation 2, Rule 2 that will satisfy all of the Clean Air Act's PSD requirements. At that point, PSD permitting in the Bay Area will no longer be a federal program

[9] The District adopted several provisions in Regulation 2, Rule 2 that were aimed at obtaining EPA approval for a PSD program, but EPA never approved them as being effective for purposes of implementing the federal PSD requirement. Sources subject to PSD requirements must obtain a federal PSD permit under EPA's regulations in order for the permit to be legally effective.

[10] Currently, EPA has only partially delegated its PSD permitting authority to the District. For permits that fall within the scope of this partial delegation, the District processes and issues the federal PSD permit on EPA's behalf. For permits that are outside the scope of the partial delegation, EPA processes and issues the permits itself.

governed by EPA's regulations, but will become a part of the District's permitting program implemented through the District's permitting regulations.

iv. "MINOR" NSR

Under the federal Non-Attainment NSR and Prevention of Significant Deterioration requirements, these programs are applicable to new and modified sources at "major" facilities, which is defined as facilities that emit 100 tons per year or more of a regulated NSR air pollutant (or, for PSD, 250 tons per year or more for certain source categories).[11] EPA has also adopted requirements that apply to District permitting of facilities that fall below these thresholds. These requirements – called "Minor NSR" by EPA[12] – are less stringent and comprehensive, but they are still important required elements that the District's permitting regulations must contain for EPA to approve them. These Minor NSR program requirements will not be outlined in detail here, but certain relevant requirements are referred to in other parts of this document where applicable.

b) State Law Requirements

The District's NSR program is designed to implement the Clean Air Act's NSR provisions outlined above. It must therefore satisfy these minimum federal requirements in order for EPA to approve it. The District adopts its NSR program under the authority granted to it under California law, however,[13] which imposes additional requirements that the District must satisfy in implementing NSR permitting. These additional requirements apply over and above the minimum federal requirements under the Clean Air Act. The District must ensure that its NSR program satisfies these state-law requirements as well as fulfilling EPA's minimum requirements under the federal Clean Air Act.

i. STATE REQUIREMENTS FOR NSR PERMITTING

The Health & Safety Code specifies a number of additional requirements aimed at attainment of ambient air quality standards. These requirements are set forth in Division 26, Part 3, Chapter 10 of the

[11] These emissions thresholds apply to the facility's maximum emitting potential, not to its actual emissions. Thus, even if a facility has historically emitted only 90 tons per year, it would still be over the 100 tons-per-year threshold if it could possibly emit more than that amount under its design and operational constraints and permit limitations.

[12] EPA often refers to these "Minor NSR" requirements as if they were a separate permitting program. Technically, these requirements – which are set forth in 40 C.F.R. Sections 51.560 through 51.164 – apply to all NSR permitting, including permitting of facilities over the "major" facility threshold as well as those under the threshold. The difference with facilities over the "major" facility threshold is that they are also subject to the additional "major NSR" requirements in 40 C.F.R. 51.165 ("major" facility requirements for non-attainment pollutants) and/or 40 C.F.R. Section 51.166 ("major" facility requirements for attainment/unclassified pollutants). "Minor NSR" simply refers to NSR permits for new and modified sources that do not trigger the "major" NSR thresholds of Sections 51.165 and 51.166.

[13] The California legislature has granted the District the authority to adopt regulations governing air pollution emissions from stationary sources through Health & Safety Code Sections 40001 and 40702, among other provisions.

Health & Safety Code.[14] They follow the general approach of the federal NSR program in many ways, although they are more stringent in a number of areas. These requirements include (among others):

- More Stringent "BACT" Requirements: As noted above, California requires a stringent "BACT" standard that is equivalent to the federal "LAER" standard. California requires the District to implement this BACT requirement at sources with emissions of 10 pounds or more per day. This is significantly more stringent than the federal "major" NSR requirements, which do not apply to facilities with emissions below 100 tons per year.
- Lower "Offsets" Thresholds: California also requires offsets for emissions of non-attainment pollutants at a lower level that the federal program. California requires the District to require offsets for NOx and VOC at facilities with a potential to emit 10 tons per year of those pollutants. Again, this is significantly lower than the 100-ton-per-year federal threshold for offsets.

ii. SB 288 and the Prohibition on Relaxing District NSR Rules.

The Health & Safety Code also contains an important prohibition on relaxing any NSR Rules from the standards that were in effect as of the end of 2002. This statutory prohibition is in the Protect California Air Act of 2003, also known as "SB 288".[15] The Legislature enacted this provision specifically in response to an EPA initiative known as "NSR Reform" that relaxed certain federal requirements in 2002. The California legislature disagreed that such a relaxation was appropriate for the state, and so it enacted SB 288 to ensure that the California air districts did not follow EPA's lead. This prohibition is implicated most centrally in the Proposed Amendments in connection with adopting the District's PSD program, and it is discussed in detail in that regard in Section IV.B.3.g.ii. of this Staff Report. But more generally, SB 288 also provides an additional statutory requirement that applies for the entire set of regulatory updates that are addressed by the Proposed Amendments. The Proposed Amendments may not relax any of the existing provisions in the District's current NSR Rules, to the extent that they were in effect as of the end of 2002.

3. Title V "Major Facility Review" Permitting

The second permitting program that the District is addressing at this time is the so-called "Title V" permitting program, which is named after the Title in the federal Clean Air Act in which the requirement was established.

The Title V permitting program is an operating permit program. It does not create any substantive regulatory requirements that facilities must adhere to. Those substantive requirements come from legal authorities such as the pre-construction NSR permitting requirements discussed above, from the District's regulations that limit emissions from specific source types, from ARB and federal regulations,

[14] Health & Safety Code §§ 40910-40930.

[15] *See* Health & Safety Code §§ 42500 *et seq.*

and from various other legal provisions. The Title V program is designed to collect up all of those various disparate legal requirements in one single document to improve enforceability, implementation, and transparency. This allows facility operators, inspectors and members of the public to easily access all of the legal requirements to which the facility is subject, which aids in ensuring compliance. Title V permitting also enhances compliance by requiring permittees to monitor emissions and to certify compliance with applicable emissions limits. Title V permitting therefore plays an important role in implementing air quality regulation at major facilities, although it does not impose any additional substantive emissions control requirements.

Like the NSR program described above, Title V permitting is ultimately a federal requirement established under the federal Clean Air Act, but it is intended to be implemented by the States. State air quality agencies like the Air District adopt Title V regulatory programs using their legal authority granted to them under state law, and then EPA reviews those state programs to ensure that they meet the Clean Air Act's minimum requirements for stringency. Once EPA approves the state agency's program, that permitting program becomes the effective Title V permitting program in that area. A facility that obtains a state Title V permit under such an EPA-approved complies with the Title V requirements of the Clean Air Act. (If EPA does not approve a state program for some reason, then EPA has to step in and become the permitting authority. Sources in such areas would have to obtain a federal Title V permit from EPA in order to comply with the Clean Air Act.)

EPA has promulgated regulations describing what a state must include in its Title V permitting program in order for EPA to approve the program. These minimum requirements for Title V programs are set forth in Part 70 of Title 40 of the Code of Federal Regulations. The District currently has an approved Title V program, which is set forth in District Regulation 2, Rule 6. The District is proposing to make several changes in Regulation 2, Rule 6, to reflect certain recent changes in EPA's requirements for an approved Title V program. These recent changes are described in Section III. below.

C. Current Status of the Air District's New Source Review and Title V Permit Programs

The District's current Regulation 2 includes New Source Review and Title V permitting programs that implement these federal and state requirements.

With respect to NSR, the District has adopted Non-Attainment NSR permitting requirements in Regulation 2, Rule 2 (New Source Review) and related provisions. EPA approved the District's Regulation 2, Rule 2 for Non-Attainment NSR purposes most recently on January 26, 1999.[16] The District's Non-Attainment NSR program were approved as meeting the federal minimum requirements for Non-Attainment NSR permitting, and they also meet the additional state-law requirements for non-attainment pollutant permitting. In addition, the District has revised its NSR program several times since then, most recently on June 15, 2005, although these more recent revisions have never been finally approved by EPA. The Proposed Amendments will update the District's current NSR permitting provisions to address all current federal Non-Attainment NSR requirements (including recent

[16] *See* 64 Fed. Reg. 2850 (Jan. 26, 1999).

developments such as the Bay Area's non-attainment designation for $PM_{2.5}$). The District will then submit them (through ARB) to EPA for approval.

With respect to PSD permitting, for historical reasons EPA has never approved the District's PSD regulations. For this element of NSR, the District has never had an EPA-approved program. Instead, EPA's federal PSD program set forth in 40 C.F.R. Section 52.21 governs PSD permitting for sources in the Bay Area. PSD permits issued under this program are federal permits issued through EPA's authority under the Clean Air Act, not District permits issued through the District's authority under the California Health & Safety Code. PSD permits are governed by federal law and regulations, and they are appealable through the Environmental Appeals Board (EPA's federal administrative tribunal) and ultimately to the federal courts. For administrative convenience, EPA has delegated the processing of certain types of federal PSD permits to the District, and the District evaluates and issues such permits on EPA's behalf. But even where the District processes the permits, the permits remain federal PSD permits issued under EPA's authority. As EPA's Environmental Appeals Board has noted, in such cases the District is implementing EPA's federal regulatory authority "standing in the shoes" of EPA. The Proposed Amendments will adopt a District NSR program for EPA approval, at which point the District will be able to implement PSD permitting under its own regulations.

With respect to Title V permitting, EPA has approved the District's Title V program. Title V permitting in the Bay Area is a District permitting program implemented through District Regulation 2, Rule 6. EPA approved the Title V permitting provisions in Regulation 2, Rule 6 on June 23, 1995.[17] The Proposed Amendments will make necessary changes to the District's Title V program to reflect recent developments, and the revised regulations will be submitted to EPA for approval.

This is the current state of the District's NSR and Title V permitting regulations. The Proposed Amendments will make changes to these regulatory programs as they currently exist. The full text of the District's current regulations can be found on the District's web page (www.baaqmd.gov/Divisions/Planning-an-Research/Rules-and-Regulations.aspx). For PSD permitting, the PSD regulations that currently govern permitting in the Bay Area can be found at 40 C.F.R. Section 52.21.

[17] *See* 60 Fed. Reg. 32,606 (June 23, 1995).

III. RECENT REGULATORY DEVELOPMENTS NECESSITATING REVISIONS TO THE DISTRICT'S NSR AND TITLE V PERMITTING RULES

District Staff have undertaken this rulemaking effort and have developed the Proposed Amendments to address a number of recent regulatory developments that have affected NSR and Title V permitting. These recent developments include the following.

A. EPA's Designation of the Bay Area as "Non-Attainment" of the Short-Term Federal Air Quality Standard for $PM_{2.5}$

EPA has recently designated the San Francisco Bay Area as "Non-Attainment" of the NAAQS for short-term concentrations of fine particulate matter. This means that EPA has made an administrative determination that the amount of $PM_{2.5}$ in the ambient air in the Bay Area exceeds the NAAQS, the federal standard for the maximum healthy amounts of $PM_{2.5}$ that can be present in the air we breathe. The NAAQS for short-term $PM_{2.5}$ requires that concentrations of $PM_{2.5}$ must not exceed 35 $\mu g/m^3$, averaged over a 24-hour period. EPA reviewed data on the amount of $PM_{2.5}$ in the air measured at locations around the Bay Area between 2006 and 2008, and based on this data designated the Bay Area as non-attainment of the NAAQS effective December 14, 2009. More recent air quality data show that $PM_{2.5}$ levels have come down to below this standard, but as an administrative matter EPA's non-attainment designation is still legally in effect. As an EPA-designated "Non-Attainment Area", the Clean Air Act requires the District to undertake a number of actions to address the situation.

One CAA requirement that the District must satisfy as a result of the $PM_{2.5}$ non-attainment designation is to develop a planning response to ensure that the Bay Area will be able to comply with the NAAQS. The District is responding to this mandate by preparing a $PM_{2.5}$ "Clean Data Finding" to demonstrate for EPA's review that current $PM_{2.5}$ levels are now below the standard. In addition, the District is pursuing a comprehensive set of initiatives to further address existing particulate matter pollution issues throughout the Bay Area to ensure that ambient particulate matter levels continue to decline.[18]

The other main requirement that the District must satisfy is to amend its NSR permitting rules to implement the Non-Attainment NSR permitting requirements for $PM_{2.5}$. The Clean Air Act requires that the District adopt Non-Attainment NSR requirements for $PM_{2.5}$ and submit them to EPA for approval within three years after the date of the non-attainment designation. The District committed to updating its NSR program to add $PM_{2.5}$ requirements as part of Stationary Source Measure No. 16 (SSM-16) in its 2010 Clean Air Plan (CAP). The Proposed Amendments will implement SSM-16 by adding $PM_{2.5}$ to the category of pollutants that are regulated under the NSR program.

[18] More information about the District's ongoing efforts to address particulate matter pollution in the Bay Area can be found in the District's recent publication "Particulates Matter: Understanding PM to Protect Public Health in the Bay Area", available at www.baaqmd.gov/Divisions/Planning-and-Research/Plans/PM-Planning.aspx. This document also provides additional information on the "Clean Data Finding" and the District's planning response to the $PM_{2.5}$ non-attainment designation.

In addition, as part of EPA's $PM_{2.5}$ NSR implementation regulations, EPA has clarified how particulate matter emissions must be measured. There are two components to PM emissions: (i) solid particles that are emitted directly from the exhaust stack; and (ii) gaseous components that are not in solid form when they are emitted but that rapidly condense to form solid particles as they cool down in the ambient air. The first component is known as "filterable" particulate matter, and the second component is known as "condensable" particulate matter. Historically, NSR regulations have not explicitly defined how PM is to be measured, and in many cases NSR has been applied taking only the filterable component into account (although in some cases condensable particulate matter has been included as well). In part, this was because testing methodologies were not as advanced for the condensable component as they were for the filterable component. More recently, however, improvements in testing methodologies have led EPA to revise its particulate matter definitions to specify explicitly that both the filterable and condensable components must be included for all purposes for NSR permitting. EPA's regulations require that the District amend its particulate matter definitions – both for $PM_{2.5}$ and for PM_{10} – to state explicitly that such emissions include both the filterable and condensable components.[19]

B. EPA's Addition of Greenhouse Gases as a Pollutant Regulated Under the New Source Review and Title V Programs

EPA has also begun regulating greenhouse gases (GHGs) as an air pollutant under the Clean Air Act. Specifically, EPA adopted its "Light Duty Vehicle Rule", which establishes GHG emissions standards for new light duty cars and trucks starting with the 2012 model year. As a result of these regulations, GHGs are now "subject to regulation" as that phrase is used under the NSR and Title V programs. These programs require NSR and Title V permitting for major stationary sources for all pollutants that are "subject to regulation", which now includes GHGs. The District's permitting programs must now include GHGs to reflect this requirement.[20]

For the NSR program, there is no NAAQS for GHGs and so the Bay Area is not, by definition, in non-attainment of any NAAQS for GHGs. GHGs are therefore an "attainment" pollutant subject to the PSD element of the NSR program.[21] As discussed above, PSD permitting is currently administered by EPA in the Bay Area under its federal regulations, as the District does not have an EPA-approved PSD program. If the District were to leave that situation as it exists now, EPA would implement PSD permitting for GHGs along with the rest of PSD permitting, with no action necessary by the District. District Staff have come to realize that having EPA administer the PSD element of NSR permitting while the District administers the rest of the NSR program is unworkable, however, for a number of reasons, and so the Proposed Amendments establish a District PSD program for approval by EPA. This proposed District PSD program will address GHGs along with all other elements of PSD permitting.

[19] Further details can be found in EPA's $PM_{2.5}$ Implementation Rule, 73 Fed. Reg. 28,321 (May 16, 2008).

[20] Further details on EPA's efforts to regulate GHGs, and how they impact the NSR and Title V permitting programs, can be found in EPA's so-called "Tailoring Rule", 75 Fed. Reg. 31,515 (June 3, 2010).

[21] Technically, GHGs are "unclassified", but unclassified pollutants are treated as attainment pollutants for purposes of NSR permitting.

For Title V permitting, the District has an EPA-approved Title V program that implements Title V permitting under its own regulations, as with Non-Attainment NSR. The District's current Title V regulations do not address GHGs explicitly, although they do contain a provision that allows the District to treat facilities that emit GHGs as subject to Title V permitting as "designated facilities". A designated facility is defined in District Regulation 2-6-204 as a facility in a source category that has been designated as subject to Title V by EPA, which now includes facilities that emit GHGs. "Designated facilities" are subject to Title V permitting requirements under District Regulation 2-6-304. This existing provision does give the District authority to address GHGs under Title V, but it is not an optimal approach from a regulatory standpoint. The District therefore needs to revise its Title V program to address GHGs explicitly. The Proposed Amendments will do that.

C. Need for EPA-Approved "Prevention of Significant Deterioration" Provisions in District Regulations

In addition to these recent regulatory changes, the District has come to realize based on recent experience that the lack of an EPA-approved PSD permitting program in the Bay Area is not a workable situation for stationary source permitting. Currently, PSD permitting is implemented in the Bay Area as a federal program under the auspices of EPA Region IX. Rather than have the District adopt its own PSD program under District Regulations, instead EPA Region IX has delegated its federal authority to the District to issue federal permits on EPA's behalf. When this system of delegation was first set up, it appeared to be a workable arrangement because EPA's PSD permitting procedures are very similar to the District's Non-Attainment NSR permitting procedures, and EPA presumed that if the District simply followed its own permitting procedures, that would satisfy both District requirements and federal PSD requirements. However, a number of situations have arisen where slight differences between the District's permitting requirements and the federal PSD requirements have led to problems with PSD permitting that resulted in procedurally defective PSD permits. These problems have resulted in delays in processing PSD permits, situations where certain federal procedural requirements were not followed properly because they are different from District requirements, and even litigation over the validity of PSD permits issued by the district under EPA's delegated authority. It is now clear that having separate permitting regulations for Non-Attainment NSR (under District regulations) and for PSD (under EPA's federal regulations) is untenable. It is clear that to avoid such problems the District needs to adopt its own District PSD permitting requirements and have EPA approve them for PSD permitting in the Bay Area.

D. Additional Deficiencies Identified by EPA Region IX Staff Review

In addition to addressing the regulatory developments outlined above, District Staff also conferred with EPA Region IX staff during the rule development process about the District's current permitting program. EPA Region IX staff identified several areas where the District's current program does not satisfy EPA's requirements and needs to be revised.

Most significantly, EPA Region IX staff informed the District that EPA has changed its policy regarding the District's current NSR applicability requirements for modifications to existing sources. EPA no longer

considers the District's existing definition of when a source is "modified" and thus becomes subject to NSR permitting requirements to satisfy Clean Air Act requirements. EPA Region IX staff have therefore informed the District that it must change its current definition of "modified source" in order for EPA to continue to approve the District's NSR program. (This issue is addressed in more detail in Section IV.A.1. below.) The Proposed Amendments include revisions to the District's existing definition of the term "modified source" to address this concern.

EPA also identified certain other areas where the District's NSR program should be strengthened to comply with EPA's requirements. The Proposed Amendments include a number of other revisions that will help address these concerns, including the expanded public notice and comment opportunities being provided for NSR permits and the provisions requiring permit applicants to demonstrate that emissions increases from their new and modified sources will not result in a violation of the NAAQS. EPA's concerns regarding specific permitting issues are noted in the detailed analysis of the Proposed Amendments in Section IV.

E. Issues Identified by District Staff That Need To Be Addressed

District Staff have also identified a number of more minor substantive areas in recent years where the NSR and Title V permitting programs could be improved. No matter how well designed a regulatory program is, implementing it in practice nearly always reveals areas where it could be made to work better. District staff have identified several such areas, and have taken the opportunity to address them while the Proposed Amendments were being developed. The specific areas where such revisions are being made are identified in the detailed analysis of the Proposed Amendments in Section IV.

F. Need to Clarify and Simplify District Regulatory Language

Finally, District staff and others have realized that the District's NSR regulations are in some places difficult to understand and implement. The regulations have developed over the years as new requirements have been added or updated, and sometimes that has happened without a great deal of consideration of how the regulations work as a coherent whole. District Staff have therefore realized that Regulation 2, Rule 2 (and certain other provisions) are in need of an overhaul to reorganize and clarify them. In addition, certain regulatory language is confusing and it can be difficult to understand how the regulation is intended to be applied in practice. This situation can cause confusion among the regulated community and others about what exactly is required by the regulations, and it can lead to inconsistent implementation by District staff. To address these issues, the Proposed Amendments reorganize Regulation 2, Rule 2 (and related provisions) and revise much of the regulatory language used to present it in a manner that is clearer and easier to understand.

IV. DETAILED ANALYSIS OF PROPOSED REGULATORY REVISIONS

This section of the Staff Report describes in detail the amendments to District Regulation 2 that Staff are proposing in order to address the regulatory developments outlined in Section III above. The discussion begins with Rule 1, which sets forth general requirements applicable to all permitting under Regulation 2. It then discusses Rule 2, which contains the District's New Source Review permit program, followed by Rule 4, which contains the rules for banking emission reduction credits in connection with Rule 2's emissions offsets requirements. It then discusses Rule 6, which contains the District's Title V permit program. It concludes with a discussion the effective date of the Proposed Amendments and how the District will transition to the revised Regulation 2 after it is adopted.

A. Proposed Revisions to Regulation 2, Rule 1 – General Permit Requirements

The Proposed Amendments make several changes to District Regulation 2, Rule 1, which sets forth the general requirements for District permitting. Many of these changes are necessary to support the implementation of the proposed updates to the NSR and Title V permitting programs, including issues that have been identified by EPA as needing to be addressed in order for the District's programs to be approved. Others are necessary to address confusion or ambiguity that has arisen in applying the rules in their current form. The proposed revisions to the general permitting requirements in Regulation 2, Rule 1 are discussed below. The revisions are addressed in the order of the amount of discussion and comment from interested members of the public that they generated during the rule development process.

1. Definitions of "Modify" and "Alter" – Sections 2-1-233 and 2-1-234

The Proposed Amendments include important revisions to the definitions of the terms "modify" and "alter". These terms are highly important in the administration of NSR permitting, because NSR applies to "new and modified" sources. The definition of what constitutes a "modified" source therefore establishes the threshold applicability requirement for NSR permitting: If a proposed change at a source is a "modification", then all applicable NSR permitting requirements (e.g., BACT, offsets, PSD air quality impact analyses, public notice and comment, *etc*.) must be complied with in order for the District to issue an authority to construct to allow source to make the change. An "alteration", by contrast, is a change at a source that is not substantial enough to trigger NSR requirements. The District still conducts a permitting review of such changes to ensure that they will not violate any applicable air quality requirement, but the permit does not need to go through the NSR review process.

The Proposed Amendments include two important sets of changes to these definitions. The first set of changes includes language changes to the District's current "modification" and "alteration" tests to make them simpler and to reduce ambiguity in how they are applied. These are non-substantive changes that will simply clarify how the District's NSR program works currently. Given how these terms function in determining NSR applicability, is it important that they be clearly specified in Regulation 2. The second set of changes involve adding a new element to the "modification" definition that EPA is requiring to ensure that the District's NSR program complies with federal NSR program requirements.

This is a substantive change that EPA is requiring based on a change in policy on how NSR must be applied. EPA has informed the District that the "modification" definition that it has approved in the past will no longer be acceptable and must be changed. Both of these sets of revisions are discussed in turn below.

a) Clarification of Current "Modification" Test (Increase In Potential to Emit) – Section 2-1-234.1

The touchstone of what constitutes a "modification" as opposed to an "alteration" under the District's current Regulation 2 is whether the change at the source will increase the source's capacity to emit a regulated air pollutant – either by allowing an increase above an existing permitted emissions limit or, if there is no permit limit, by increasing the source's physical capacity to emit air pollutants based on its design and operational characteristics. This is the essence of the concept of "potential to emit", which is defined in Regulation 2-1-217. Under the District's current "modification" test, any change at a source that increases its potential to emit air pollutants is a modification that is subject to NSR permitting requirements under Regulation 2, Rule 2. This has been codified in Regulation 2 since at least 1994, when Regulation 2 was amended to specify that a "modification" is based on an increase in a source's "permitted emission level" (as opposed to its actual emissions), and it is included in the version of the Regulation that EPA has approved in the California State Implementation Plan. With respect to this definition, the Proposed Amendments will state the "potential to emit" increase concept in a more direct manner than the current language, and provide certain additional language on how exactly the concept is to be implemented in practice. These amendments are contained in proposed Section 2-2-234.1, and they do not involve any substantive changes from the District's current "modification" test. (The substantive changes being proposed under EPA's new policy direction are in proposed Section 2-2-234.2, and they are addressed in Section IV.A.1.b. below.)

- **Current Regulations**

The District's current "potential to emit" modification test is set forth in current Section 2-1-234, the definition of "Modified Source". Current subsections 2-1-234.1 and 234.2 specify that if the change at the source will result in an increase in any daily or annual emission level established in an authority to construct or permit to operate (or in the production rate or capacity used to estimate the emissions level), then the change is a "modification".[22] If the source does not have any such emissions level specified in a permit, Subsection 2-1-234.3 provides that the change will be a "modification" if it will result in an increase in the source's daily or annual potential to emit (or its maximum production rate or capacity that is used to estimate emissions of) any regulated air pollutant above its current maximum physical potential to emit (i.e., the maximum level at which the source is physically capable of emitting, given its design and operational characteristics). The source's current potential to emit is determined by (i) its highest attainable design capacity, (ii) its highest capacity listed in a District permit to operate, or

[22] The current definition also provides that the APCO may convert hourly limits to daily limits by multiplying the hourly limit by 24 hours, and may convert daily limits to annual limits by multiplying the daily limit by 365 days.

(iii) its highest documented emissions (or production rate or capacity) prior to March 1, 2000, whichever is the highest, as set forth in subsection 234.3.1. If the source's potential emissions are limited by an upstream or downstream "bottleneck",[23] then the "bottlenecked" potential is used as the source's maximum effective potential and any increase above this "bottlenecked" maximum constitutes a modification to the source, as described in subsection 234.3.2.

For toxic air contaminants, a change at a source will constitute a "modification" if it increases toxic emissions in an amount that would result in an increased cancer risk of more than 1.0 in one million for carcinogens, or an increased chronic hazard index of more than 0.20 for non-carcinogenic toxic risk. This element of the definition is set forth in current Section 2-1-234.4.

"Alterations" are changes at a source that do not fall within the definition of "modification" in Section 2-1-234 and therefore do not have to go through the NSR process in order to obtain an authority to construct. The definition of what it means to "alter" a source is set forth in current Section 2-1-233, and covers any physical change to, or change in the method of operation of, a source that may affect emissions but that will not result in an increase above the levels set forth in Section 2-1-234. The current definition also provides three specific scenarios that are expressly defined as alterations: (i) replacement of burners with non-identical burners; (ii) maintenance of glass furnaces that involve replacement of components with different types of components; and (iii) extension of the physical boundaries of a semiconductor fabrication area.

- **Proposed Amendments**

The proposed non-substantive revisions do not make any changes to the meaning of these definitions (the substantive changes from adding the new provision required by EPA are discussed in the next section). But they will streamline how the definitions work in practice.

With respect to the "modification" definition, the Proposed Amendments will simply state in Section 2-1-234.1 that a "modification" is a change at a source that will result in an increase in the source's potential to emit. (Section 2-1-234.2 will contain the additional "Federal Backstop" test being required by EPA as discussed below.) This simple definition is substantively the same as the more complicated definition in the current Section 2-1-234, but it uses wording that is much easier to understand and apply. "Potential to Emit" is a familiar regulatory concept, with a definition set forth in current Section 2-1-217. Moreover, it is a concept that succinctly captures the intent expressed in Section 2-1-234, and one that is already well-understood by the regulated community and others involved in air quality regulation such as consultants and engineers. This change will replace the current lengthy three-part

[23] A "bottleneck" is some operational limitation present in an upstream or downstream unit that prevents a source from being operated at full capacity. For example, if a source processes a feedstock from an upstream unit, and the upstream unit's maximum production rate provides only enough feedstock to run the source at 50% capacity, the source is "bottlenecked" at 50% capacity – the source's maximum capacity as a practical matter. The source is treated as if this level of operation, and the corresponding emissions, is its maximum potential to emit, even though this is not a permit limit or the maximum design or operational limit on the source's operations. If some future change allows the source to be operated above 50% capacity, that is treated as an increase in the source's maximum capacity under Subsection 234.3 and constitutes a "modification" to the source.

test in subsections 2-1-234.1 through 2-1-234.3 with a concise one-sentence test that achieves the same substantive result.

In addition, based in part on feedback from commenters during the rule development process, the Proposed Amendments retain certain additional language in the definition clarifying how the concept of an increase in Potential to Emit will be applied in specific situations. These clarifications are already inherent in the concept of "Potential to Emit" as defined in Section 2-1-217, but the language is being retained in Section 2-1-234.1 to make them explicit and to ensure that they are clear to all those who will use this definition. These clarifications include the following.

- Determining Daily and Annual PTE: Potential to Emit is a concept that applies to both long-term and short-term emissions, and an increase in either a source's daily or annual potential to emit will be a modification under Section 2-1-234. The Proposed Amendments retain the language referencing the fact that, in establishing longer-term PTE, an hourly emissions limit on a source may be multiplied by 24 to determine the source's daily potential to emit, unless the source cannot operate at its full permitted hourly limit for 24 hours per day. This statement simply reflects the reality that, in absence of any other legal or physical limitation on operations, if the source is operated at its full hourly maximum for the full 24 hours in a day, its daily emissions will be its hourly maximum emissions times 24. Similarly, the Proposed Amendments retain the language referencing the fact that a source's daily emissions limit may be multiplied by 365 to determine annual potential to emit, unless the source cannot operate at its full permitted daily limit for all 365 days per year. These methods of establishing longer-term PTE by multiplying up from a short-term permit limit only apply if they will accurately reflect the source's actual maximum longer-term ability to emit air pollution, of course. They will not apply where there is any reason why the use of short-term permit limits does not accurately represent longer-term potential to emit (e.g., if the source is constrained in some way from actually operating at short-term maximum emission rates over the longer term). These principles are already implied in the concept of PTE, but proposed Section 2-1-234.1.1 states them explicitly to make it clear how the concept will be applied in practice.

- "Group" Limits: A permit limit that applies to combined emissions from multiple sources does not establish an individual source's potential to emit, unless the limit imposes an effective, legally enforceable limitation specifically on the emissions from the individual source. As such, a permit limit applicable to multiple sources will not in most cases be determinative in applying the definition of "modification". For example, if a boiler is subject to a limit applicable to the combined emissions of the boiler and nine other sources, the facility could implement a change at the boiler to double its capacity and related emissions, and yet could keep the same group limit applicable to the ten sources combined. In such a situation, the doubling of the size of the boiler should be treated as a "modification" and subject to NSR review, even if the facility keeps the same overall group limit. Again, this is a principle that is already implied in the concept of PTE, but proposed Section 2-1-234.1.1 states it explicitly. In this scenario, the boiler's individual PTE is obviously being increased, even if the group permit limit is unchanged.

The one exception is where a group limit does in fact impose an effective limit specifically on the emissions of an individual source, for example by imposing a bottleneck on facility operations that establishes the maximum rate at which the source can be operated. In such a case, the group limit does in fact establish the PTE,[24] and any increase in this PTE will be a "modification" under Section 2-1-234.1.

- Determining Physical Capacity as PTE: As noted above, where a source's maximum emissions are not limited by any enforceable permit condition, the source's PTE is determined by its maximum physical capability to emit air pollutants given its applicable design and operational characteristics. Proposed Section 2-1-234.1.2 states explicitly that in such a situation, the source's PTE will be determined by the most relevant and reliable technical information available regarding the source's operation, which may include design information, engineering specifications, or other information. The particular information used in an individual permitting situation will depend on the facts and circumstances of each individual case.

- "Bottlenecked" Sources: The "potential to emit" concept takes into account both (i) direct limitations on a source's ability to emit air pollution resulting from the source's own physical capacity, and (ii) indirect limitations on the source's actual effective capacity as a result of the capacity of any upstream or downstream process. Where a source cannot run at its full, maximum capacity because its rate of operation is limited by the capacity of some other process that it depends on, the source's PTE is based on the maximum rate of operation that the source can achieve taking into account this limitation imposed by the other process. This situation is referred to as a "bottleneck" in the production process. The source's PTE is the maximum emissions it can achieve as limited by the "bottleneck"; and any increase in such PTE because of the removal of a "bottleneck" constitutes a "modification" under the definition in Section 2-1-234. This principle is also addressed in proposed Section 2-1-234.1.2.

Although these concepts are already inherent in the basic concept of "Potential to Emit", the Proposed Amendments include language in Section 2-1-234 to state clearly that they apply for purposes of determining whether a change at a source increases the source's PTE and is thus a "modification".

With respect to toxic air contaminants, proposed Section 2-1-234.1 will incorporate the existing risk thresholds in current section 2-1-234.4 into proposed subsection 2-1-234.1.3. There will be no substantive change in how the definition applies for toxic emissions. Proposed subsection 234.1.3 provides that if the increase in toxic emissions does not result in an increase in cancer risk of more than one in one million or an increase in non-cancer chronic hazard index of more than 0.20, then it is not a

[24] Obviously, there are a number of factors, both legal and technical, that can constrain a source's potential to emit under different circumstances. In this example, the group limit is the factor that is determinative in establishing the potential to emit because this is the limitation on emissions that must be relaxed in order to accommodate the modification at the source. In other contexts, there may be other factors constraining emissions that are the determinative factors for establishing the source's PTE and determining whether a change constitutes a "modification". If one of those other constraints is relaxed, so as to increase PTE, that is a modification even if the group limit does not change.

"modification". This provision incorporates the existing toxics threshold levels in the District's current definition in Section 2-1-234.4. The Proposed Amendments also add a clarification that the toxic risk screening trigger levels in Table 2-5-1 of Regulation 2, Rule 5 can be used as screening tool in evaluating whether a change at a source will exceed these risk levels, as is the District's current practice. The screening levels in Table 2-5-1 are emissions levels that are conservatively presumed not to cause toxic risks over the threshold levels in subsection 234.1.3. If a change at a source will not increase the source's potential to emit any of the pollutants listed in the Table by the corresponding screening levels listed in the Table, then one can conservatively conclude that any increase in risk associated with such change will not exceed the threshold levels specified in subsection 234.1.3. If any increase in emissions will exceed any of the screening levels listed in Table 2-5-1, then a health risk assessment must be conducted to ascertain the actual increase in risk that will result from the change. If, based on such an assessment, the actual risk is above the threshold levels specified in subsection 234.1.3, then the change will constitute a modification.

With "modification" thus defined, the definition of "alteration" is simply any change at the source that does not involve an increase in the source's potential to emit above any of the levels specified in Section 2-1-234 (i.e., increases that would make the change a "modification"). The proposed revisions to Section 2-1-233 make this definition clear. In addition, the revisions remove the current references to the three specific situations identified as "alterations" in the current definition. These specific scenarios were listed in the current definition in Section 2-1-233 because they are changes at sources that will not, in most instances, involve any increase in emissions that would make them "modifications" under the definition in Section 2-1-234. For example, replacement of burners at a combustion source, component replacement at a glass furnace, and physical expansion of a semiconductor fabrication area are not likely to involve an increase in permitted limits or physical capacity of the source. As such, these scenarios already constitute "alterations" as defined in Section 2-1-233, and it is redundant to call them out specifically in the definition. Moreover, if any such change were to result in an increase in emissions above existing permitted levels or physical capacity, it is important that the District review the change under its NSR program to ensure that any applicable regulatory requirements are applied to the emission increases that would result from the change. For these reasons, the proposed amendments remove the specific scenarios in Subsections 2-1-233.

The purpose of requiring permits for "alterations" is to ensure that changes at an existing source that may affect emissions are not in fact "modifications" that require NSR permitting. The District added the "alteration" permit requirement in 2000 to allow the District review such changes to confirm that they will not in fact trigger a "modification". Since then, the District has interpreted the definition of "alteration" in keeping with this intent, and District Staff intend that such an interpretation will continue to apply under the Proposed Amendments. In general, the types of changes that Staff envision as requiring an authority to construct as an "alteration" include the following:[25]

[25] Note that in all cases, it is assumed that there would not be any emissions increase that would render the change a "modification" under Section 2-1-234. Any change listed here that increases emissions in a manner that constitutes a "modification" would need to undergo full NSR review under Regulation 2, Rule 2.

Examples of projects that will generally be "Alterations" and require permit applications:

- Changing or replacing an abatement device;
- Adding gas wells to a landfill gas collection system;
- Any change that is defined as a modification or reconstruction under NSPS/NESHAPS, but does not involve any emission increase that triggers Section 2-1-234.

Examples of projects that generally will not be "Alterations" and not require permit applications:

- Changing coating or solvent, not otherwise limited by permit conditions;
- A decrease in throughput or production rate;
- Installing emission testing ports on a stack;
- Removing fuel oil backup capability for a furnace or boiler;
- Changing material stored in a tank, provided the new material has equal or lower vapor pressure, and it is not limited by permit condition.

Each specific project must be evaluated on a case-by-case basis, but these examples provide a general idea of how the "alteration" definition is applied.

b) Addition of "Federal Backstop" Provision Required By Change in EPA Policy – Section 2-1-234.2

In addition to the non-substantive revisions discussed above, EPA has also informed the District that it has changed its policy on how California air districts, including this District, must define "modification" for purposes of implementing the federal NSR requirements. EPA has indicated that it will no longer accept the District's current modification test based on increases in "potential to emit" for NSR for major facilities. To address this EPA requirement, the Proposed Amendments add an additional element to the "modification" definition that will apply to "major" facilities. This additional element is in proposed Section 2-1-234.2. District Staff refer to this additional element as the "Federal Backstop" test because it is being added at EPA's request to ensure that there are no situations where the District's current test could be less stringent than what EPA requires under its NSR regulations.

The "modification" definition in Section 2-1-234 will therefore involve a two-part test under the Proposed Amendments. **The first element, in Section 234.1, is the District's existing modification test** based on increase in potential to emit. A change at a source will constitute a "modification" if it increases the source's potential to emit as set forth in Section 234.1. **The second element, in Section 234.2, will be the "Federal Backstop" test for major facilities** and will incorporate EPA's "major modification" test in 40 C.F.R. Sections 51.165 and 51.166. A change at a major facility that will be a "major modification" under those federal regulations will also be a "modification" and will be subject to NSR requirements. Both elements of this modification definition will apply equally: a physical change or change in the method of operation will be a "modification" if it satisfies *either* of these two applicability tests (or both).

This "Federal Backstop" test in Section 2-1-234.2 functions by incorporating by reference the federal "major" NSR applicability tests in 40 C.F.R. Sections 51.165 (for non-attainment pollutants) and 51.166 (for attainment pollutants). This incorporation by reference will work as follows.

- Non-Attainment Pollutants – Subsection 234.2.1: 40 C.F.R. Section 51.165 governs "major" NSR for Non-Attainment pollutants, and so the Proposed Amendments make the federal "major modification" applicability test under Section 51.165(a)(1)(v) applicable for NOx, VOC, $PM_{2.5}$ and SO_2 through proposed District regulation 2-1-234.2.1. (These four pollutants are the pollutants and precursors for which the Bay Area is subject to non-attainment NSR requirements.) Under this test, "major" NSR applies where the facility (i) is over the 100 tpy "major" non-attainment NSR facility threshold in 40 C.F.R. Section 51.165(a)(1)(iv), and (ii) undergoes a physical change or change in method of operation that will result in a net increase in emissions (over an actual emissions baseline) of a "significant" amount.[26] Subsection 234.2.1 provides that if the change at a source will result in an increase in emissions of these pollutants that will constitute a "major modification" as defined in 40 C.F.R. Section 51.165(a)(1)(v), then the change is a "modification" under Regulation 2, which subjects it to NSR permitting under Regulation 2, Rule 2.

- Attainment (and Unclassified) Pollutants – Subsection 234.2.2: 40 C.F.R. Section 51.166 governs "major" NSR for all other pollutants besides non-attainment pollutants (*i.e.*, attainment and unclassified pollutants), and so the Proposed Amendments make the federal "major modification" applicability test under Section 51.166(b)(2) applicable for all other pollutants besides the four non-attainment pollutants addressed under subsection 234.2.1. Under this test, "major" NSR applies where the facility is over the PSD "major" facility threshold in 40 C.F.R. Section 51.166(b)(1), which is either 100 tpy or 250 tpy depending on the source category. NSR permitting is triggered whenever such a facility undergoes a physical change or change in method of operation that will result in a significant net increase in emissions (over an actual emissions baseline), using the same NSR significance thresholds noted above. Subsection 234.2.1 provides that if the change at a source will result in an increase in emissions of these pollutants that will constitute a "major modification" as defined in 40 C.F.R. Section 51.166(b)(2), then the change is a "modification" under Regulation 2, which subjects it to NSR permitting under Regulation 2, Rule 2.

In implementing these federal "major modification" tests incorporated by reference to 40 C.F.R. Sections 51.165 and 51.166, all of the regulatory provisions in those C.F.R. sections applicable for implementing these tests must be followed in determining whether an increase is a "modification" under Section 2-1-234.2. This includes all of the federal definitions that apply when determining

[26] "Significant" is defined using EPA's NSR significance thresholds, which are discussed further in relation to the NSR program in Regulation 2, Rule 2. These significance thresholds vary depending on the pollutant, but generally they range between 10 tpy and 100 tpy. The District has also adopted these thresholds in its own definition of "significant" for NSR permitting in current Section 2-2-227 (although it is the federal rules being incorporated by reference that will govern application of the "Federal Backstop" test under Section 2-1-234.2, not any District definitions).

whether change results in a "major modification" and all of the emissions increase calculation procedures associated with such a determination. In particular, this includes the use of an actual emissions baseline as provided for in Sections 51.165 and 51.166, and also includes the use of the "NSR Reform" calculation methodologies that are part of EPA's federal regulations in Section 51.165(a)(2) and Section 51.166(a)(7). Furthermore, where the NSR Reform calculation methodologies are implicated, the documentation, monitoring, recordkeeping and reporting requirements in Section 51.165(a)(6) and (a)(7) and Section 51.166(r)(6) and (r)(7) must be followed. Using these federal provisions in applying the definition of "major modification" is implicit in the incorporation-by-reference of the federal regulations in Sections 51.165(a)(1)(v) and 51.166(b)(2). But the Proposed Amendments also add explicit language on this point at the end of proposed Section 2-1-234.2 to ensure that all who use the regulations will understand how the federal incorporation by reference applies, and to remove any potential for debate over the legal enforceability of these elements of the federal program with respect to implementing the "Federal Backstop" provision.

Under this "Federal Backstop" test, there will be no possibility that any physical change or change in method of operation at a major facility that EPA would treat as a "major modification" subject to NSR can escape NSR permitting under the District's program. To the extent that there could be any such changes that would not be "modifications" under the District's existing test in Section 2-1-234.1, they will be captured under the "Federal Backstop" test in Section 2-1-234.2 and will be subject to NSR permitting. Adding this additional element to the District's definition of "modification" will address EPA's concern that there could be specific situations in which the District's test could be applied in a manner that is less stringent than the federal program. District Staff do not anticipate that the Federal Backstop provision will be implicated very often (if at all), given that the District's existing modification test is very stringent and will most likely require NSR permitting in any situation where the federal test would require it. But if any situation were to arise where the District's current test applies more narrowly than the federal test, the Federal Backstop will ensure that it does not escape NSR review.

Although it is unlikely to be implicated very often, this Federal Backstop test will add an additional layer of complexity in implementing the District's NSR program. The District has little choice but to adopt it, however, as EPA has made clear that it will no longer accept a definition of "modification" that is based on increases in "potential to emit". This is a clear change in EPA policy, as EPA has never objected to using this "modification" definition in the past in approving the District's NSR program. Moreover, EPA has recently approved other California air district NSR programs using the very similar modification definitions explicitly based on increases in potential to emit. In discussing this issue with Region IX staff, District Staff pointed out that there are a number of reasons why the District's current EPA-approved modification test is at least as stringent – if not more stringent – than the federal minimum requirements of EPA's NSR regulations. These reasons include:

- The fact that the District's modification test does not include a *de minimis* exemption for emissions increase that are less than "significant". Unlike EPA's test, the District's modification test covers <u>all</u> increases in PTE, no matter how small.
- The fact that the District's modification test looks to short-term increases in PTE and not just annual increases. EPA's program excludes major increases in the capacity of the equipment at a

facility, as long as the facility can cap its annual emissions increase at a less-than-significant level. The District's modification test captures all such increases; EPA's does not.

- The fact that the District's test applies to increases from each individual source. EPA's program allows a facility to average out increase and decreases at multiple sources to avoid triggering a modification, through approaches such "netting" and "Plantwide Applicability Limits". These provisions allow facilities to avoid NSR review under EPA's test in many situations that are captured by the District's test.

District Staff also discussed all of these reasons why the District's current "modification" test is very stringent and is more than adequate to be approvable under EPA's regulations in its May 25, 2012, Background Discussion document. Nevertheless, EPA Region IX has clearly indicated that it will no longer approve the District's current "modification" test. EPA Region IX staff informed the District in a letter dated July 26, 2012, that the District will need to change its current modification definition in order to retain EPA approval of its NSR program.[27] District Staff have developed the "Federal Backstop" provision in Section 2-1-234.2 in the Proposed Amendments to address EPA's position on this issue. In addition, District Staff have sought to ensure that EPA will apply this new policy consistently across all of the California air districts, as there are several others that use a similar "modification" definition based on increases in potential to emit. EPA Region IX staff have stated that they do not believe that other air district regulations that define "modification" as a change at a source that will "result in the potential to emit being higher than the historic potential emissions" constitute a PTE-to-PTE test – although they declined to explain the basis for their conclusion when District Staff inquired. District Staff will continue to address these issues with EPA Region IX staff, and are confident that EPA will ensure that it is applying the federal NSR requirements consistently throughout the State.

2. Addressing $PM_{2.5}$ and "Condensable" Particulate Matter in District Permitting Programs – Sections 2-1-229, 2-1-241, 2-1-603, 2-1-604 and 2-1-605

EPA has made a number of changes in its requirements for permitting programs addressing particulate matter. EPA now requires that the District's particulate matter permitting provisions must address fine particulate matter ($PM_{2.5}$) specifically, as opposed to just PM_{10}. In addition, EPA now requires that the District's particulate matter permitting provisions must specifically address "condensable" particulate matter emissions – that is, emissions that are in the gaseous phase when emitted but condense at ambient temperatures to form solid particulate matter. Historically, the District's particulate matter definition has not specified whether the condensable portion should be included, and so the condensable portion oftentimes has not been included when permitting particulate matter emissions (although in many cases it has). The Proposed Amendments include revisions to Regulation 2, Rule 1 to address both of these recent developments.

First, the Proposed Amendments add a definition of $PM_{2.5}$, in **proposed Section 2-1-241**. Although the District has long regulated particulate matter, it has never applied permitting requirements specifically

[27] *See* EPA Comment Letter, at pp. 2-4, § I.2.a.

for $PM_{2.5}$. Accordingly, a new definition is required to specify exactly what will be covered by the new $PM_{2.5}$ requirements. The definition specifies that $PM_{2.5}$ means particulate matter with an aerodynamic diameter of 2.5 microns or less.

Second, the Proposed Amendments clarify in both the existing definition of PM_{10} in **Section 2-1-229** and in the new definition of $PM_{2.5}$ in **proposed Section 2-1-241** that these pollutants are measured including both filterable emissions and condensable emissions. This specification that condensable emissions are included tracks EPA's definitions for including condensable emissions.

The Proposed Amendments also specify the measurement procedures that will be used in implementing these definitions in practice, which are set forth in **proposed Section 2-1-603**. Section 2-1-603 provides that EPA's required source test methods, EPA Methods 201A and 202, must be used for all measurements of PM emissions from specific stationary sources. The only exceptions will be in situations where the physical characteristics of the emissions to be measured render these methods inapplicable because of the limitations of the test methods. These situations include cases where the emissions have a moisture content or temperature that is higher than allowed under the specifications for using Methods 201A and 202. In these limited cases an alternative method must be used, and prior written approval will have to be obtained from the APCO and from EPA. For measuring ambient PM concentrations, proposed Section 2-1-603 provides that the methods set forth in 40 C.F.R. Parts 50, 53, and 58 shall be used.

These new regulatory provisions will be effective going forward into the future and will determine how the District's permitting requirements for particulate matter will be applied henceforth. But it is also important to specify how prior regulatory determinations regarding particulate matter requirements will be treated, and in particular for situations where these prior determinations may not have addressed $PM_{2.5}$ or condensable PM emissions. The Proposed Amendments include new **Sections 2-1-604 and 2-1-605** to address how such prior determinations will be addressed.

The guiding principle that Staff have used in addressing these issues in the Proposed Amendments is that when the new provisions take effect, what has taken place before that date will be treated as past history and will not be revisited to address condensable emissions any differently. The new provisions will only be applied prospectively going forward after the date they take effect. They will not be applied retroactively to any permit conditions or other regulatory determinations that may have been made in the past taking only the filterable portion into account. In essence, "the books are closed" on such prior historical determinations, and the District will not reopen such determinations retroactively to reevaluate them based on condensable emissions. The Proposed Amendments apply this general principle in specific situations as follows.

With respect to determining compliance with permit limits that were established in the past under Regulation 2, the Proposed Amendments add **Section 2-1-604** to clarify that compliance with such conditions in the future will be determined on the same basis that was used when the permit condition was imposed. As noted above, permit conditions have most often been based only on the filterable portion of PM emissions, and where that is the case compliance with such conditions in the future will

continue to be based on the filterable portion only. There have been cases where existing PM emissions limits have been based on condensable PM emissions as well, however, and in those cases compliance will continue to be determined taking the condensable portion into account. However an existing permit limit was established, the amendments will not reopen that past history; the permit limit will continue to apply as it was intended when it was adopted.

With respect to prior regulatory applicability determinations and emissions calculations, such as whether a source's PM emissions were at a level that would trigger some permitting requirement, those past determinations will similarly not be reopened when the Proposed Amendments take effect. Thus, where a permit was issued for a source in the past and the District determined that it was not subject to District BACT requirements because its filterable PM_{10} emissions were less than 10 pounds per day, the District will not go back and reopen that determination and require BACT retroactively even if the source's total PM_{10} emissions (filterable + condensable) are greater than 10 pounds per day. Similarly, where a permit was issued to a facility in the past that was subject to PM_{10} offsets requirements, and the facility provided offsets for its PM_{10} cumulative increase that was calculated considering only the filterable portion, the District will not go back and reopen that cumulative increase determination and change the amount of offsets that were required. What has been established in the past (before the effective date of the amendments) is past, and these historical regulatory determinations will be considered final and will not be reopened when the amendments take effect.

For all new regulatory determinations made in the future, after the effective date of the amendments when the new definitions will become applicable, both the filterable and condensable portions of PM_{10} and $PM_{2.5}$ must be counted for all purposes.[28] Thus, new permit limits for PM_{10} and $PM_{2.5}$ will be based on both portions, in keeping with the new definitions that are being proposed, and sources will need to include both portions when determining compliance with such limits. In the example above regarding the source that was not subject to BACT because its filterable PM emissions were below 10 pounds per day, when that source is modified, a new determination will need to be made regarding its PM emissions taking into account condensable emissions as well. If the total PM emissions are over 10 pounds per day, then the source will be subject to BACT (assuming an emissions increase that triggers BACT under 2-2-301, of course). And in the example above regarding the facility that provided offsets for a cumulative increase calculated based on filterable emissions only, for future emissions increases it will need to calculate the amount of such new increases based on both filterable and condensable emissions and provide additional offsets accordingly.

[28] The District's current particulate matter definitions do not specify whether or not the condensable portion should be included, which has resulted in the District including it or excluding it on a case-by-case basis as warranted by each individual permitting situation. The current definitions will continue to be in effect up until such time as the Proposed Amendments take effect, and so the District will continue to retain the discretion to include or exclude condensable emissions up until that time. Nothing in this Staff Report is intended to prejudice any such determinations. In particular, the District may opt to include condensable emissions under its existing definitions even before the Proposed Amendments take effect, where appropriate. Once the Proposed Amendments take effect, inclusion of the condensable portion will be mandatory in all cases.

These principles are set forth in **Section 2-1-605** in the Proposed Amendments. The following descriptions explain in more detail how these principles will work in some specific permitting situations that commonly arise. District Staff also provided some examples of how these provisions will apply at actual facilities in the Appendix at the end of the May 25, 2012, Background Discussion document, and those examples are further incorporated herein as additional explanation of how the Proposed Amendments will work in practice.

- **Determining the amount of an emissions increase or decrease:** A number of provisions in Regulation 2 depend upon the amount of an emissions increase or decrease resulting from a change at a source. These include the definition of "modification" in Section 2-1-234 and the emissions increase/decrease calculation procedures in Section 2-2-604, among others. Determining the amount of an emissions increase or decrease from a change requires comparing emissions before the change with emissions after the change. Under the Proposed Amendments, both the emissions before the change and the emissions after the change will be determined including both the filterable and condensable portions of the PM emissions, to ensure that increases and decreases are always calculated based on an "apples-to-apples" comparison.[29] This is an important principle, because one cannot accurately compare emissions before and after unless one uses the same definition of emissions for the "before" measurement and the "after" measurement.

  Determinations of the amount of an increase or decrease made after the effective date of the Proposed Amendments will use the new definitions for all purposes, even if a portion of the "before" emissions occurred before the effective date. Specifically, if an emissions increase or decrease from a change to a source is made in comparison to the source's emissions over a multi-year baseline period, and part of that baseline period is before the effective date of the Proposed Amendments, the determination will take into account both the filterable and condensable portions during the entire baseline period – including the portion of the baseline period before the effective date. This approach will ensure that emissions increases and decreases reflect a true "apples-to-apples" comparison under all circumstances.

- **Determining whether a source is subject to BACT under Section 2-2-301:** BACT is required for sources with a PTE of 10 pounds or more per day (for new sources and for modifications with any increase in emissions). Under the Proposed Amendments, this 10 lb/day threshold must be applied including both filterable and condensable PM emissions. In some cases, sources that were treated as being under 10 lb/day historically based only on filterable PM emissions may find that they are subject to BACT the next time that they are modified, if their PM emissions are

[29] Note that some provisions in District regulations look to increases in potential emissions and some look to increases in actual emissions. These principles will apply in all such cases. Regardless of whether potential emissions or actual emissions are being measured (or whether the comparison involves both actual and potential emissions), all emissions rates used in measuring emissions increases and decreases will include both the filterable and condensable portions. In all such cases, both the "before" emissions and the "after" emissions will be calculated using both portions, to ensure an "apples-to-apples" comparison with respect to how PM_{10} and $PM_{2.5}$ are defined and measured.

over 10 lb/day when including the condensable portion as well. Section 2-2-301 would apply to such sources at such time as the source is modified and becomes subject to NSR requirements (assuming there is an increase in PM emissions from the modification and all other elements of Section 2-2-301 apply).

- **Determining whether a facility is subject to offset requirements under Section 2-2-303:** Offsets are required for facilities with a PTE of 100 tons per year or more of PM_{10} (and under the Proposed Amendments for $PM_{2.5}$ as well). Under the Proposed Amendments, this 100 tpy threshold must be applied including both filterable and condensable PM emissions. In some cases, facilities that were historically treated as being under 100 tpy of PM_{10} based only on filterable PM emissions may find that they are over the 100 tpy threshold when the condensable portion is included. Section 2-2-303 will require such facilities to offset their cumulative increase for PM_{10} and $PM_{2.5}$ the next time they apply for a permit for a new source or modification at the facility that triggers NSR. Such facilities will not need to provide offsets immediately when the amendments become effective, but the next time the District issues an NSR permit for the facility that is subject to Section 2-2-303, the facility will need to provide offsets for the cumulative increase in PM_{10} and $PM_{2.5}$ emissions at the facility per the terms of Section 2-2-303.

- **Determining the amount of cumulative increase in PM_{10} and $PM_{2.5}$ emissions at a facility subject to the Section 2-2-303 offsets requirements:** Facilities that exceed the applicability threshold in Section 2-2-303 must provide offsets for their cumulative increase in PM_{10} emissions and (under the Proposed Amendments) in $PM_{2.5}$ emissions back to the cumulative increase baseline date.

  For PM_{10}, the cumulative increase baseline date is April 5, 1991. A facility's cumulative increase in PM_{10} is therefore the sum of all the increases in PM_{10} emissions authorized by permits issued for the facility back to 1991. Cumulative increases associated with permits issued in the past, before the effective date of the amendments, were determined in accordance with the existing definition and were most often based on filterable PM_{10} emissions only. Any such prior cumulative increases associated with past permits that were determined based only on filterable emissions will not be reopened or recalculated to include condensable emissions. Nor will any offsets provided in connection with such prior permits be reopened or recalculated. Such prior history will be considered final for all future regulatory purposes. Any new cumulative increases associated with new permits issued after the effective date of the amendments will be calculated based on both the filterable and condensable portions, however, consistent with the new definitions. Going forward, additional cumulative increase associated with new permits will be based on both filterable and condensable, and offsets will have to be provided for that amount of cumulative increase as required under Section 2-2-303.

  For $PM_{2.5}$, the cumulative increase baseline date will be the effective date of the amendments, and so the situation will be less complicated. A facility's cumulative increase for $PM_{2.5}$ will be

the cumulative increase associated with all permits issued after the effective date of the amendments, and all such cumulative increases will be determined based on both filterable and condensable in accordance with the new definitions.

- **Determining the amount of emission reduction credits available for PM_{10} and $PM_{2.5}$ emission reductions:** If a facility undertakes an enforceable reduction in emissions that satisfies the applicable requirements, it can take credit for such reductions either (i) by crediting such reductions against an increase in PTE from a new or modified source as a "contemporaneous on-site emission reduction credit", which reduces the amount of cumulative increase for which offsets (banked credits) need to be provided; or (ii) by banking the reduction for future use to offset future cumulative increases at the same facility or at a different facility. The regulatory determination of how much credit should be given for such reductions – that is, the amount of the emission reduction credit available – is made at the time of the permit application in which the credit is sought. For a contemporaneous on-site emission reduction credit, the credit is sought and the determination is made at the time the facility applies for a permit for a new/modified source at the facility and wants to use the contemporaneous on-site emission reduction credit to reduce the cumulative increase associated with the new/modified source. For a banked credit, the credit is sought and the determination is made at the time the facility submits a banking application to bank the emission reduction credit.

  After the effective date of the Proposed Amendments, all such determinations will be made using the revised definitions and will be required to take into account both the filterable and condensable portions of the PM emissions. These are regulatory determinations about the amount of an emission reduction credit that can be granted that are being made after the new definitions are in effect, and so they will be made using the PM measurements required by those definitions. The amount of emission reduction credit will be based on the source's emissions during the baseline period,[30] before the source was shut down or otherwise reduced its emissions (and will be subject to any "surplus" adjustment required under Section 2-2-603), and such emissions will be determined taking into account both filterable and condensable emissions. Note also that both filterable and condensable emissions will be counted for the entire baseline period, even if the baseline period extends back before the effective date of the regulations, in order to ensure an accurate "apples-to-apples" comparison.

- **Title V "Major Facility Review" Applicability:** If a facility has historically been treated as not being subject to Title V permitting requirements because it was not a Title V "Major Facility" based on an assessment of its PM emissions being below the 100 tpy "Major Facility" threshold that took into account only filterable emissions, the District does not intend to revisit that historical regulatory determination. That is, the District does not intend to treat such a source's historical operation without a Title V permit as having violated any Title V requirements where the District determined that no Title V permit was required based on filterable emissions only.

[30] The baseline periods for contemporaneous on-site emission reduction credits and for banking of credits are set forth in Section 2-2-603.

However, going forward after the effective date of the Proposed Amendments, if the District determines that the facility is over the 100 tpy Major Facility threshold when both filterable and condensable emissions are included, the District will require the facility to apply for and obtain a Title V permit. The "books will be closed" with regard to any such past history before the effective date of the regulations, but for future purposes after the effective date, all regulatory determinations must be made based on both filterable and condensable emissions. This includes ongoing determinations of whether a facility requires a Title V permit to operate going forward.

These provisions in Sections 2-1-604 and 2-1-605 will help ensure a smooth transition to the new requirements to address $PM_{2.5}$ in particulate matter permitting and to ensure that condensable PM emissions are taken into account in all regulatory determinations.[31]

3. Temporary Permits under the Accelerated Permitting Program – Sections 2-1-302.2 and 2-1-106

The Proposed Amendments include clarifying revisions regarding temporary permits issued under the District's Accelerated Permitting Program. The Accelerated Permitting Program, set forth in Sections 2-1-302.2 and 2-1-106, allows certain new sources and modifications to be constructed and operated during the permit review process based on a preliminary review and determination that the source will comply with applicable BACT requirements (or that it is simply a replacement of an existing abatement device that will not increase emissions). The District conducts this preliminary review and, upon determining that the source is eligible, issues a temporary permit that allows the owner/operator to begin construction and operation while the full permitting review is completed. Once the District completes the full permitting review, it issues a full permit to operate as it would with any other source (assuming that the source will comply with applicable regulatory requirements and is eligible for a permit).[32] Current Section 2-1-302.2 provides for the issuance of temporary permits to operate under the Accelerated Permitting Program, and current Section 2-1-106 provides an exemption from the authority to construct requirement of Section 2-1-301 for sources with a temporary permit to operate. With this exemption, the owner/operator can begin construction and operation of the source as soon as it receives its temporary permit to operate, pending the full permit review that would otherwise need to be completed before an authority to construct can be issued. This Accelerated Permitting Program serves to reduce the delay involved in waiting for the full permit review to be completed in situations where it is preliminarily clear that the source will comply with BACT and related requirements, while still

[31] A related issue in how the District will transition to these new provisions governing PM permitting concerns how existing banked particulate matter Emission Reduction Credits will be treated. The provisions for Emissions Reduction Credits and banking are in Rules 2 and 4 of Regulation 2 and are addressed in Sections IV.B. and IV.C. of this Staff Report where those provisions are discussed.

[32] In the event that the District's full permitting review indicated that a permit to operate should not be granted for some reason, the District would deny the permit and the source would be required to cease operation unless and until it could remedy whatever defects prevented issuance of a full permit to operate.

ensuring that the source is subjected to the complete permit review process before a full permit to operate is issued.

The Proposed Amendments do not make any substantive changes to the Accelerated Permitting Program. The amendments will simply clarify how the program works. In particular, the amendments are necessary to respond to a misconception that has arisen that a new source or modification can be constructed and operated immediately upon submission of a complete application. Allowing a source to be constructed simply based on the submission of an application would be an impermissible "notice-and-go" permitting requirement – that is, a requirement that allows for construction without any prior review and approval by the permitting authority – which is inconsistent with the Clean Air Act. The District's Accelerated Permitting Program is not such a requirement, as it does in fact require review by the District and issuance of a temporary permit before construction and operation of the source can begin (and a full, comprehensive permit review before a full permit to operate can be issued). The proposed amendments will clarify this situation.

In addition, a number of the substantive requirements for permit review under the Accelerated Permitting Program and issuance of a temporary permit are set forth in the exemption in Section 2-1-106, and not in the provisions of Section 2-1-302.2, which sets forth the procedures for the program. This situation is confusing because users of the regulation look to Section 2-1-302.2 to find the rules on how the program works for issuance of the temporary permit; Section 2-1-106 is designed to provide an exemption from the authority to construct requirement so that construction and operation can begin under the temporary permit even though an authority to construct has not been issued. The proposed revisions therefore move the procedures for accelerated permitting that are currently in Section 2-1-106 – including the specifications for what types of sources are eligible for accelerated permitting in current subsections 106.1 through 106.3 – into Section 2-1-302.2 where they should properly be listed. Section 2-1-106 will retain the statement of exemption from the authority to construct requirement for sources that have obtained a temporary permit under the Accelerated Permitting Program.

The Accelerated Permitting Program will work the same way under these amendments as it does currently. The program will be available for three types of permit applications. The first is for any new source, or any modification to an existing source, that can be preliminarily determined to be compliant with BACT and certain other applicable requirements pending full permit review. To be eligible, the applicant must make a preliminary demonstration that the source will meet the following requirements:

(i) the source will comply with the District BACT requirement in Section 2-2-301, either because its PTE will be below the 10 lb/day BACT threshold (determined without taking into account the effect of any abatement device or equipment) and therefore not subject to the requirement, or because the source has been pre-certified as compliant with BACT under Section 2-1-415;

(ii) the source will not have a toxics PTE above any of the screening threshold levels set forth in Table 2-5-1 of Regulation 2, Rule 5 (also determined without taking into account the effect of any abatement device or equipment); and

(iii) the source is not subject to the public notice requirements in Section 2-1-412 applicable to sources located within 1,000 feet of a school.

These requirements are set forth in proposed subsection 2-1-302.2.1. The second type of permit application eligible for the Accelerated Permitting Program is an application for an abatement device that will simply be a replacement for an existing abatement device and will not increase the potential to emit any regulated air pollutant of either the abatement device or any source whose emissions it abates. The requirements for such abatement devices are set forth in proposed subsection 2-1-302.2.2.[33] The third type of permit application eligible for the Accelerated Permitting Program is an application for an alteration to an existing source, as defined in Section 2-1-233. Per Section 2-1-233, an alteration is a change at a source that will not result in an increase in emissions from the source. The provisions for alterations under the Accelerated Permitting Program are set forth in proposed subsection 2-1-302.2.3.

The mechanics of the Accelerated Permitting Program will continue to work in the same way under the Proposed Amendments. An applicant that wants to construct a new source or a modification or alteration to an existing source, or a replacement of an existing abatement device, that is eligible for the Accelerated Permitting Program must submit a complete application consisting of (i) an application form and source data form(s); (ii) payment of fees; (iii) an explanation of which category of eligibility for the Accelerated Permitting Program the application falls into; (iv) a certification that the application meets all of the applicable eligibility criteria of the relevant category; (v) a certification that the source is not subject to Sections 2-1-316 through 2-1-319 (which are provisions that limit eligibility for the program); and (vi) a certification that the applicant has reviewed all applicable New Source Performance Standards (NSPS) and has determined that the application will comply. (This latter requirement is being inserted to ensure that applicants have considered the potential for NSPS applicability before starting the project, in order to prevent a situation where they may install equipment only to realize later that it must be re-designed because of NSPS requirements.) Upon receipt of such an application, the APCO shall review the application and shall issue a temporary permit to operate upon verification that all eligibility criteria have been met.[34] The owner/operator can then commence construction and operation of the source (or abatement device) immediately upon receipt of the temporary permit to operate. The APCO shall

[33] Note that for both of these types of projects, the Accelerated Permitting Program in not available if the project will be subject to any of the provisions of Sections 2-1-316 through 2-1-319, which limit the applicability of permit exemptions for certain toxics sources, for sources that cause a public nuisance, for certain sources of hazardous substances, and sources with emissions of more than 5 tons per year of any regulated air pollutant.

[34] The review of an application under the Accelerated Permitting Program is not the same as the full compliance review undertaken before issuing the full Permit to Operate. The review for issuing a temporary permit to operate looks only to whether the information required under elements (i)-(vi) in Section 2-2-302.2 has been submitted. If all of the required elements of the application have been submitted, the APCO will promptly issue the temporary permit to operate to allow the source to begin construction and operation, and will then commence the full compliance review in order to issue the full permit to operate (assuming the source is eligible). Of course, if it is immediately obvious on the face of the application that the project will not be eligible for the full permit to operate, the APCO may deny the application immediately with an explanation of the reasons why; in such a situation, there would be no reason to wait for the full compliance review in order to identify the reasons why the application should be denied.

continue to process the application after issuance of the temporary permit to operate and shall take final action on the application – that is, shall issue or deny a full permit to operate – within 35 days of receipt of the complete application in accordance with Section 2-1-408. (Note that this process necessarily relies on the applicant following through with the full application process in a timely manner; if an applicant fails to provide any requested information necessary for completing the full permit review or otherwise unreasonably delays the District's processing of the application, the APCO may cancel the application and the temporary permit to operate will cease to be valid per the terms of Section 2-1-302.2.)

The temporary permit to operate shall cease to be effective upon this final action. The source can operate under the temporary permit to operate up until such final action, but must maintain records sufficient to demonstrate that emissions do not exceed applicable qualifying levels under the Accelerated Permitting Program. If the final action on the permit application is issuance of a full permit to operate, the source will then be able to operate from that point onward under the full permit to operate. If the final action on the permit application is denial of the permit, then the source will be required to cease operating unless and until it can remedy any deficiencies and obtain a valid permit. In constructing and operating a source under a temporary permit to operate, the owner/operator assumes the risk that the source will not be able to satisfy District regulations upon a full permit review and will not be permitted. The fact that the owner/operator has incurred costs in constructing the source under the temporary permit will not be a reason for granting a full permit to operate or a defense in an enforcement action if the source continues to operate after the permit is denied.

4. Permitting of Portable Combustion Equipment – Sections 2-1-413 and 2-1-105

The Proposed Amendments include several revisions addressing regulation of portable combustion equipment. These revisions address the potential for confusion that has arisen because of the fact that the term "portable" is referenced in two different contexts related to Regulation 2 permitting: (i) portable equipment registration under ARB's Portable Equipment Registration Program (PERP); and (ii) District permitting of equipment that may end up being used at multiple locations within the Bay Area under District Regulation 2-1-413.

ARB's PERP program is designed to address portable equipment (primarily diesel-fired equipment) that may be moved around among different air districts within the state. Such equipment includes portable generators that are used in multiple locations, diesel-fired construction equipment that may be moved from one construction site to another as needed, rental equipment that may be rented out to different users in different locations, and the like. Instead of requiring such equipment to get multiple permits from the multiple different air districts in which it may operate, ARB addresses such equipment on a state-wide level by providing a mechanism for it to obtain a single registration document that will allow it to operate anywhere within the state. Substantively, the PERP program requires such equipment to comply with ARB's Airborne Toxic Control Measure (ATCM) requirements, among others. Procedurally, the owner/operator of such equipment registers it with ARB based upon a certification that it complies with such requirements, and that registration then allows the equipment to be operated in any air

district without having to get a district-specific permit.[35] The central element of the PERP program is that the equipment must be portable: If the equipment is not such that it could be moved around frequently from one district to another so that getting individual district permits would be burdensome, then it makes more sense to have it obtain a permit from the specific air district in which it will be operating.

The District's permitting provisions for sources that will be used at multiple locations is somewhat different. That program applies for sources that are not PERP-registered – and therefore need to obtain a District permit – but that may end up being operated at different locations within the Bay Area. The District's rules provide for issuing permits for such operation in multiple locations in Regulation 2-1-413. That provision provides for permits that allow operation at any location within the Bay Area, as long as the source satisfies certain requirements to ensure that it will not have any significant air quality impacts no matter where it is used – for example, the source must satisfy the toxic risk screen requirements of Regulation 2-5, it cannot be used within 1000 feet of a school, etc.

Currently, Regulation 2-1 uses the term "portable" to define the types of equipment that are eligible under both of these two separate programs. The exemption in Section 2-1-105 for PERP-registered equipment applies to "portable" equipment; and the District permitting provisions for equipment that may be used in multiple locations in Section 2-1-413 also applies to "portable" equipment. It is likely that in adopting a single, common definition for use under both programs, the District felt that using a single definition would simplify the implementation of both programs.

District staff have now come to realize, however, that making both of these programs apply to "portable" equipment, and using a common definition for that term, actually complicates the implementation of these programs. This is because the purpose behind the two programs, and the types of permitting situations that they were intended to apply to, are in fact different. The District's provisions related to the PERP program – specifically, the exemption in Section 2-1-105 for PERP-registered equipment – were intended to exempt all equipment that is regulated by ARB under the PERP program from District permitting requirements, in order to avoid duplicative regulation of these sources. For this purpose, the key regulatory concept is whether or not the equipment is registered under ARB's PERP program. By contrast, the District's provisions for multiple-location operations – Section 2-1-413 – were intended to ensure that any source that is not permitted for a specific location is such that it will not cause any significant impacts no matter where in the Bay Area it is operated. For this purpose, the key regulatory concept is whether there would be any air quality concerns arising from a location where it may operate, such as the potential for significant toxic impacts on nearby receptors under Regulation 2, Rule 5, or operation within 1000 feet of a school. Although there are likely to be similarities between these two different situations in many contexts, they are in fact different and so it does not make sense

[35] PERP registration supersedes all local air district permitting requirements. (See Health & Safety Code § 41752(a)(1).) In the Bay Area, the Air District has adopted Regulation 2-1-105, which explicitly exempts PERP-registered portable equipment from District permitting requirements, in recognition of the preemptive effect of PERP registration.

that they both have a single, common requirement that equipment be "portable" in order to be eligible for the District's regulatory provisions applicable to the two situations.

The Proposed Amendments therefore revise the way Regulation 2, Rule 2 will address these two situations. The exemption in Section 2-1-105 for PERP-registered equipment will be revised to state explicitly that if equipment is validly registered under ARB's PERP program, then it is exempt from District permitting requirements. This exemption simply recognizes the fact that ARB PERP registration preempts District permitting requirements. If a piece of equipment has a valid PERP registration, it is not required to obtain a District permit as a matter of law. In practice, such equipment will still need to be "portable" in order for these provisions to apply. But the requirement will be implemented through ARB's requirement to be "portable" in order to be eligible for PERP, not through any District definition of "portable". Simply put, if equipment is portable and otherwise satisfies ARB's PERP requirement, and it is duly registered under and complies with ARB's PERP program, then it is exempt from District permitting requirements. There are no additional eligibility requirements for this exemption beyond valid PERP registration.

With respect to the District's provision for multiple-location permitting under Section 2-1-413, the Proposed Amendments remove the language about such permitting being applicable only to equipment that is "portable" under the relatively narrow definition that is currently set forth in Section 2-1-220. Equipment that may be operated at multiple locations around the Bay Area may obtain such a multiple-location permit as long as it meets the substantive requirements of Section 2-1-413 designed to prevent impacts on nearby receptors no matter where the source is operated (e.g., satisfaction of toxic risk requirements under Regulation 2-5, no operation within 1000 feet of a school, etc.). Such equipment will be eligible for multiple-location permitting even if it does not meet the strict definition of "portable" used in the PERP program. For example, equipment may be operated at a single location for more than one year, which would classify it as not "portable" under PERP. Such equipment may still be moved around from one location to another at various times, however, and so it still should qualify for multiple-location permitting under Section 2-1-413 (as long as it meets all the criteria set forth in that section). Similarly, equipment that is attached to a fixed foundation and would therefore not be "portable" under the PERP definition may nevertheless be moved from one location to another at times, and so it too should qualify for multiple-location permitting (again, assuming it meets all the applicable criteria). The Proposed Amendments therefore remove the language about "portable" equipment in Section 2-1-413 and focus that provision instead on the substantive protections to sensitive receptors that are the touchstone of the District's multiple-location permitting provisions. To avoid confusion on this issue of "portability", the Proposed Amendments also change the title of Section 2-1-413 to "Permits for Operation of Equipment at Multiple Locations Within the District".

Finally, with respect to the definition of "portable" in current Section 2-1-220, with the changes outlined above there is no longer any need for such a definition. For PERP-registered equipment under Section 2-1-105, the test for the exemption is simply whether the equipment has a valid PERP registration –

there is no need for a "portability" test in the District's regulations on this issue.[36] And for multiple-location permits under Section 2-1-413, the requirements for such permits are simply whether the equipment satisfies the substantive requirements under that Section – there is no need to limit such permits to "portable" equipment, as long as the equipment satisfies all such requirements. As there is no longer any need for a definition of "portable", the Proposed Amendments delete Section 2-1-220.[37]

5. Clarification of Requirements for Permit Applications – Sections 2-1-402 and 2-1-202

The Proposed Amendments also make certain clarifications to the requirements for permit applications. Current Section 2-1-402 addresses the administrative procedures for submitting an application, but it states only that all required information must be submitted. The specific requirements for the information that needs to be included is listed in Section 2-1-202, which is the definition of "Complete Application". The requirements for what information needs to be submitted with a permit application are more appropriate in the section on administrative requirements for permit applications – Section 2-1-402 – than in the definition of the term "Complete Application". The Proposed Amendments move these requirements to Section 2-1-402. "Complete Application" will be defined in Section 2-1-202 as an application that includes all of this required information.

The Proposed Amendments also make some clarifying changes to the descriptions of the information required to be submitted with a permit application. In addition, the requirement to submit PSD-related information (currently in Section 2-2-202.4) will be expanded to include all applicable information required for NSR permit applications under Section 2-2-401 (to the extent that NSR requirements of Regulation 2, Rule 2 are applicable), and a catch-all requirement will be added in Subsection 2-1-402.8 to provide that any other information requested by the APCO that is necessary to conduct a complete permit review must also be provided, to the extent it is not already covered by the specific application requirements.

[36] As noted above, the equipment will still have to be "portable" to be eligible for PERP registration, but that requirement will be implemented through ARB's PERP program. If PERP registration requires the equipment to be "portable", there is no need for the District's regulations to apply an additional requirement that it be "portable". The requirement that the equipment satisfy the PERP requirements fully accomplishes this end, without the need for any additional District "portable" requirement (or "portable" definition to specify how such a requirement is applied).

[37] There are a few other places in Regulation 2 where the term "portable" is used without any intent for any specific regulatory definition to apply. In these cases, the general dictionary definition will apply. This is appropriate for these situations, as the term is used in these places simply for its normal dictionary meaning and not for any special regulatory meaning.

6. Compliance with Material Representations in Permit Applications – Section 2-1-320

The Proposed Amendments add a new section 2-1-320, which requires that the owner/operator of a source must comply with any material representations made or information submitted in connection with its application for a permit for the source. This requirement is implicit in the requirement to obtain a permit for sources subject to permitting requirements, because the District can issue a permit only for the source described in the application on which the permit decision was made. If the owner/operator constructs and operates a source that is not the same as the source described in the application, then the source necessarily is not covered by the permit and the owner/operator is in violation of the District's permitting requirements. In order to be covered by the permit, the owner/operator must construct and operate the source as the owner/operator described it in the permit application. If the owner/operator builds and operates a materially different source instead, it is not covered by the permit.

The District has long treated information and representations submitted in connection with permit applications as binding on permit-holders under this general legal principle. The District also reminds permit recipients that such information and representations are binding and enforceable in the standard language the District uses in all permit issuance documents. The Proposed Amendments add new Section 2-1-130 to restate this principle explicitly in District regulations. This provision will serve as an additional way to ensure that owners and operators understand and are on notice of the fact that if they have represented to the District that they will build and operate their equipment in a certain way in order to obtain a District permit, then they need to comply with those representations in order to be covered by the permit that the District issues based on those representations.

It is also important to note that the touchstone for whether an owner/operator may depart from information submitted or representations made to the District in connection with a permit application is whether the information or representation is material to the District's permitting analysis and decision whether to issue the permit (and under what conditions). If the information or representation was such that the District would not have issued the permit if it understood how the source would actually be constructed or operated – or would have issued the permit, but on a different basis or with different permit requirements – then the owner/operator must build and operate the source consistent with the information or representation at issue in order to be covered by the permit. Conversely, if an application contains any information or representations that are ancillary to the permitting analysis and not relied on by the District in evaluating or deciding on the application, then the owner/operator may depart from such information or representation and still be covered by the permit.

7. Compliance with State Implementation Plan and Other Applicable Requirements – Section 2-1-321

The Proposed Amendments add a new section 2-1-321, which states that the issuance of an authority to construct or permit to operate does not relieve the owner/operator of a facility from its obligations under any applicable legal authority to comply with applicable regulatory requirements, including

(without limitation) all applicable requirements of the State Implementation Plan for California. This principle is inherent in existing law, as nothing in the District's regulations purports to make a District permit effective to preempt other regulatory requirements. The proposed amendments add new Section 2-1-321 to make this principle explicit in District regulations, which will serve as an additional means to provide notice to any permit holder who may misunderstand the effect of the permit as relieving it from its duty to comply with the law. Adding this new section also responds to comments from staff of EPA Region IX that this principle needs to be stated explicitly in District regulations for purposes of NSR approvability.

8. Effect of Explanatory Notes in Regulation Text – Section 2-1-130

In certain places in Regulation 2, explanatory notes are included to point out to readers certain information that may be helpful in understanding how the regulations work. These explanatory notes are not intended to create any regulatory requirements (beyond what is laid out in the regulatory text itself), but they are useful in certain situations to highlight important information that a reader might not readily be aware of. Staff believe that adding these explanatory notes where appropriate can help make the regulations clearer and easier to understand and implement for all involved. To make it clear that these notes are explanatory only and do not create any binding legal requirements, the proposed amendments add a new Section 2-1-130 explaining the intent behind these explanatory notes.

9. Applicability of General Provisions in Regulation 2 – Section 2-1-102

Current Section 2-1-102, entitled "Applicable Requirements", states that the requirements in regulation 2, Rule 1 apply to Rules 2, 3 and 6 of Regulation 2 (unless specifically superseded). It has always been the District's intent and practice that the general requirements in Regulation 2, Rule 1 apply to all permitting under Regulation 2, including Rules 2, 3, and 6 as well as all other provisions of Regulation 2.[38] The proposed revisions to Section 2-1-102 expand the applicability to include all such provisions. This means that any general requirement in Regulation 2 will apply to all Regulation 2 permitting. For example, the general definitions in Sections 2-1-200 *et seq*. apply to NSR permitting under Regulation 2, Rule 2, toxics permitting under Regulation 2, Rule 5, Title V permitting under Regulation 2, Rule 6, and all other situations that may arise under Regulation 2. The exception to this general rule is that if there is a requirement in a specific permitting rule that conflicts with a general requirement, then the specific permitting rule takes precedence.

[38] Note that the District's intent and understanding has always been that general requirements set forth at the beginning of a regulation (or set of regulations) apply to the more specific rules that follow. Thus, the District has always intended and understood that the general provisions and definitions in Regulation 1 apply to all District rules and regulations (unless specifically superseded). Similarly, the District has always intended and understood that the general provisions and definitions in Rule 1 of regulations such as Regulation 2 (permits), Regulation 6 (particulate matter) and Regulation 8 (organic compounds) apply to all of the specific rules in those regulations. The proposed amendments to Section 2-1-102 will simply make this principle explicit in Regulation 2.

10. Clarification of Exemption Provisions

The Proposed Amendments also make revisions to a number of the exemption provisions in the current Rule. The areas in which the current exemptions are being revised are outlined below.

In addition, at the request of EPA Region IX staff, Air District Staff have prepared an analysis of the exemptions in Regulation 2 under Section 110(l) of the Clean Air Act.[39] Section 110(l) requires that when a state revises its State Implementation Plan, EPA shall not approve the revision if it would interfere with any requirement concerning attainment and reasonable further progress, or any other applicable CAA requirement. This analysis compares the exemptions contained in Regulation 2, Rule 1 in the Proposed Amendments with the most recent EPA-approved regulations in the State Implementation Plan. As provided in that analysis, the revisions to the District's permitting exemptions under the Proposed Amendments (and those made in earlier amendments since the most recent EPA-approved version) will not interfere with any requirement concerning attainment and reasonable further progress or any other applicable CAA requirement.

a) Sources Not Subject to District Rules – Section 2-1-103

The Proposed Amendments make several minor revisions to the exemption in Section 2-1-103 for sources that are not subject to the District regulations listed in that exemption. For such sources, there is little purpose to be served by requiring them to obtain a permit (i) because the listed District regulatory requirements do not apply and therefore do not subject them to any requirements to be imposed through a permit; and (ii) because the emissions associated with such sources are minor. The Proposed Amendments make several revisions to the wording of the exemption to make it read more clearly. They also move the explanatory notes accompanying the regulatory provisions to the end of the section so that they do not interrupt the enforceable regulatory language of the section.

b) Agricultural Sources Engaged in Biomass Composting – Section 2-1-113.1.2

The Proposed Amendments clarify how the exemption for agricultural sources in Section 2-1-113.1.2 applies with respect to agricultural operations that engage in composting or similar biomass processing and also process some biomass material from non-agricultural operations. Questions have arisen in recent years over whether such operations can process biomass from non-agricultural sources and still qualify as an "agricultural source" under this exemption – and if so, how much non-agricultural material would be allowed. The Proposed Amendments add a provision establishing that such agricultural

[39] *See* CAA Section 110(l) Analysis of BAAQMD Permit Exemption Provisions in Regulation 2, Rule 1, available at www.baaqmd.gov/Divisions/Engineering/Proposed-Reg-2-Changes.aspx. Per Section 110(l), the analysis addresses all exemptions in Regulation 2, Rule 1 that are different from the exemptions contained the most recent EPA-approved version of the District's regulations in the State Implementation Plan. These changes include revisions to exemptions being made under the Proposed Amendments, and also a number of other changes that were made in previous amendments adopted by the Board of Directors but which have not yet been approved by EPA in the State Implementation Plan. The analysis addresses all changes to the exemption provisions in Regulation 2, Rule 1 that EPA will be requested to approve into the State Implementation Plan.

sources that primarily process green materials or animal waste products derived from agricultural operations can continue to be eligible for this exemption as long as they do not processes 500 or more tons per year of such material from non-agricultural operations. Providing for such operations to process non-agricultural waste materials is important because agricultural composting operations often need to find other sources of non-agricultural waste material to mix into their agricultural wastes in order to properly balance their compost product. The agricultural source exemption should allow for them to do so without penalizing them for engaging in composting. Allowing up to 500 tons per year of such wastes is consistent with the amount of biomass processing allowed under the exemption for non-agricultural composting operations under Section 2-1-115.2.3.

c) Space Heaters – Section 2-1-113.2.14

The Proposed Amendments remove the exemption in current Section 2-1-113.2.14 for natural gas and LPG space heaters with a heat input less than 20 MMBtu/hr that are not subject to any regulatory requirements under Regulation 9, Rule 7. This exemption is being removed because there are very few (if any) such devices in the Bay Area that could benefit from such an exemption; and to the extent that there are such devices, there does not appear to be any reason why they need this exemption. Regulation 9, Rule 7 applies to natural gas and LPG heaters with a heat input of 2 MMBtu/hr or more, and by definition these are not eligible for the exemption even though it nominally applies to heaters up to 20 MMBtu/hr. Moreover, there is a general exemption in Section 2-1-114.2 that applies to all natural gas and LPG devices of less than 10 MMBtu/hr, and so this exemption already addresses most equipment that would be covered by this exemption. As there is no clear justification for this exemption, it is being deleted in the Proposed Amendments.

d) Combustion Equipment Mobile Sources – Section 2-1-114

Section 2-1-114.2 provides an exemption for combustion emissions from certain internal combustion engines and gas turbines. Subsections 114.2.4 and 114.2.5 apply to engines on vehicles, trains, ships, etc. Both subsections include a statement unrelated to the exemption regarding the fact that in implementing the offsets requirements in Sections 2-2-302 and 2-2-303 of the District's NSR Rule (discussed below in Section IV.B.c.), emissions from cargo carriers associated with a facility are included and the cargo carrier emissions are counted as part of the emissions of the source that receives or loads the cargo from the cargo carriers. These references are correct in their statement of how cargo carrier emissions are treated in connection with the District's offsets requirements, but that fact is not related to the exemption involved in Section 2-1-114. The Proposed Amendments therefore remove these statements. There will be no substantive change in District regulations from this change. The engines subject to the exemption will still be exempt, and emissions associated with cargo carriers will still be counted in implementing the offsets requirements in Sections 2-2-302 and 2-2-303. To avoid any potential for confusion, new Section 2-2-610 is also being added to specify how cargo carrier emissions will be included in applying the offsets requirements.

e) Low-Usage Wipe Cleaning – Section 2-1-118.9

The Proposed Amendments revise the language of the exemption for wipe cleaning with low annual solvent usage and emissions in Section 2-1-118.9 to clarify how it applies. The revisions delineate the two requirements for applicability of the exemption into subsections 118.9.1 and 118.9.2, and clarify (i) that the limit of 20 pounds of solvent usage per year covers all wipe cleaning operations and (ii) that the 150 pound-per-year limit on VOC emissions is uncontrolled emissions.

f) Graphic Arts Operations – Section 2-1-119.5

The Proposed Amendments clarify that the exemption in Section 2-1-119.5 for graphic arts operations with emissions of less than 400 pounds of VOCs per month applies to uncontrolled emissions.

g) Modification, Replacement and Installation of Fugitive Components – Section 2-1-128.21

The Proposed Amendments include language clarifying how the exemption in Section 2-1-128.21 works in practice. This exemption applies to components that may have the potential for fugitive emissions – i.e., emissions that come from vents, valves, and the like, and not from an intended emission point such as an exhaust stack – but which do not otherwise cause emissions themselves. The exemption provides that such components (often called "fugitive components" as a short-hand reference) may be modified, replaced, or added at existing process units without a permit under Regulation 2. The Proposed Amendments will make clear how the following principles apply in implementing this exemption.

First, this exemption is only for the modification/replacement/addition of components that do not normally have air emissions during routine operations, except for their potential fugitive emissions. Such components include (although are not limited to) valves, flanges, pumps, compressors, and so forth, as listed in the regulatory language. Where other equipment is being modified, installed or replaced that is not such a component, that other equipment is not exempt from permitting simply because it has some of these fugitive components installed on it. For example, a piece of equipment (e.g., a pressure vessel) may have a number of such components installed on it. Modification of the equipment itself is not covered by this exemption and would require a permit. Only modification of the fugitive-emission components installed on the equipment can qualify for this exemption. This principle is already explicit in the current language of subsection 128.21, which states that the activity that is exempt from permitting is the "[m]odification, replacement or addition of fugitive components," not any and all changes at any equipment on which such components may be installed.

Second, the exemption is only an exemption from the requirement to obtain an Authority to Construct before engaging in the activity that constitutes the modification/replacement/addition of the component(s). It is not a blanket exclusion of fugitive emissions from such components from all regulatory oversight. Where a modification of the source on which the fugitive-emissions component is installed is not subject to an exemption and requires a permit, fugitive emissions from the components installed on the source are included in the permit review for the source, regardless of whether the

components are/were installed subject to this exemption. Thus, in the example above, say the source involved undergoes a modification that does not just involve the installation of components that is exempt under Section 2-1-128.21, but instead requires NSR permitting. The modification to the source must undergo NSR review under Regulation 2, which could involve the implementation of BACT under Regulation 2-2-301 if emissions from the source are above the applicable 10 pounds-per-day BACT threshold. In applying this 10-pound-per-day threshold, all emissions from the source are counted, including emissions that happen to be emitted as fugitive emissions from the components installed on the source. The same principle applies for application of other regulatory provisions. The modification/installation/addition of the components may be undertaken without an authority to construct (assuming the exemption applies), but the emissions from such components are still taken into account when any regulatory requirements are applied to the source on which the components are installed. This principle has always been implicit in the exemption, and it is stated explicitly the Proposed Amendments in subsection 128.21.5.

Third, modification/replacement/addition of components under this exemption cannot be used to circumvent permitting requirements where such modification/replacement/addition may result in an increase in non-fugitive emissions from the equipment on which the components are installed. For example, modification/replacement/addition of pumps or compressors on a process unit could potentially increase the effective capacity of the process unit – either directly or by removing a "bottleneck" in the overall process – and thereby increase emissions. Such an emissions increase from the process unit would be a "modification" as defined in Section 2-1-234 and would require an Authority to Construct, and the existence of this exemption for installation of such components cannot be used to avoid this permitting requirement. In such a case, the modification/replacement/addition of the component that resulted in such an emissions increase would be subject to permit review. The exemption would not apply. This principle is also implicit in the current language of the exemption, and it is stated explicitly the Proposed Amendments in subsection 128.21.1.

Fourth, the exemption applies only for the addition of fugitive-emissions components on process units where the total fugitive emissions from all additional components installed on the process unit in any 12-month period do not exceed 10 pounds per day. This is stated in the current reference to "cumulative emissions" from such components not exceeding 10 pounds per day, which will be revised to read "total allowable fugitive emissions" with an explanation that such emissions are based on the total allowable fugitive emissions under District regulations. This revision will clarify (i) that it is fugitive emissions from all such components installed within the past 12 months that is taken into account in applying the 10 lb/day requirement; and (ii) that it is total fugitive emissions that the components are legally entitled to emit that is taken into account – not typical measured leak rates or anticipated average leak rates, which may be lower than the maximum allowable leak rate, and not actual leak rates from any valves emitting in violation of District regulations (e.g., non-repairable equipment on a petroleum refinery's "turnaround list" awaiting replacement), which would be higher than the maximum allowable leak rate.

Fifth, the Proposed Amendments will establish how the exemption applies for components that are not associated with equipment that is traditionally thought of as a "process unit". Modification/replacement/addition of such components can be eligible for the exemption (assuming all requirements of the exemption are satisfied), but the limitation on fugitive emissions not exceeding 10 lb/day for all components installed within a 12-month period applies for all such components throughout the entire facility. That is, the total fugitive emissions of all components modified, replaced or installed under this exemption within a 12-month period that are not associated with a specific process unit must not exceed a combined 10 pounds per day facility-wide. The provisions for these types of components will be in subsection 128.21.2.

The Proposed Amendments revise the language of Section 2-1-128.21 to clarify how this exemption applies in practice.

11. Exemption Backstop Provision – Section 2-1-318

Section 2-1-318 sets forth a backstop that prevents a source from using the exemptions in Regulation 2, Rule 1, for sources at facilities subject to PSD permitting that will have increases in hazardous air pollutants above the PSD significance thresholds. The language of the provision uses the term "PSD Major Facility" to indicate facilities subject to PSD permitting requirements. In implementing the PSD requirements in proposed Regulation 2, Rule 2, staff have avoided using the term "major facility" in order to prevent confusion with the term "major facility" as used in the Non-Attainment NSR context. The proposed revision to 2-1-318 therefore removes the term "PSD Major Facility". Instead, Section 2-1-308 will indicate the class of facilities subject to PSD permitting requirements that fall within this backstop provision – and are therefore ineligible for the permit exemptions – by referencing the 100/250 ton-per-year PSD applicability threshold directly.

12. Timeline for Final Action on Permits – Sections 2-1-408 and 2-1-411

The Proposed Amendments make two slight revisions to the timing for final action on permit applications in specific situations.

The first concerns the final decision on applications for authorities to construct for projects that are subject to review under the California Environmental Quality Act (CEQA). For applications subject to CEQA review, current Section 2-1-408.1 provides that the APCO's 35-day period for acting on an application shall be extended until 30 days after the lead agency's final approval of the CEQA document for the project. This provision was created in recognition of the fact that the CEQA review process will often take much longer than 35 days and that the APCO is prohibited under CEQA from taking any final action on an application until the CEQA evaluation process is completed. The current regulation does not address what happens when an appeal is filed after the lead agency approves the CEQA document, however. In such a case, it would be inappropriate to take final action on the permit application because the approval of the CEQA document may ultimately be invalidated. The proposed revision to Section 2-1-408 would expand on the current procedures to provide that in the event of an appeal of the lead agency's final approval of the CEQA document, the APCO need not take final action until 30

days after the final resolution of the appeal (through a final decision on the appeal and exhaustion of all avenues for further appeal.)

The second concerns final action on issuance of permits to operate. When the District issues an authority to construct for a source, that approval authorizes construction of the source, and also authorizes initial operation during a start-up period that allows the District to review the source and determine whether it complies with the conditions in the authority to construct and any other applicable requirements. Once the District is able to confirm that the source has been built and is operating in compliance – which may involve source testing to evaluate the source's emissions, a site inspection, or other similar efforts – the District issues a Permit to Operate under Section 2-1-411 to authorize continued operation going forward. Current Section 2-1-411 provides for a start-up period of 90 days to complete this evaluation, which can be extended for an additional 90 days upon written approval of the APCO. The District has found, however, that in certain circumstances it is not possible for a source to complete its startup operations and demonstrate compliance within this 180-day window. This situation can arise with complicated industrial facilities that need to undergo a highly-involved "commissioning period" (also known as a "shakedown period") during which equipment is test-fired, evaluated, tuned, and otherwise prepared for commercial operation. In such cases, it may not be possible for the equipment to be commissioned such that it is ready for its initial source testing and related compliance determinations within 90 days or even 180 days of first fire. Section 2-1-411 needs to be amended to provide the necessary flexibility to address these situations. The Proposed Amendments will provide this flexibility.

13. Including Fugitive Emissions in Regulatory Determinations – Section 2-1-308

Current Section 2-1-308 provides that fugitive emissions – emissions that come from vents, valves, and the like, and not from an intended emission point such as an exhaust stack – must be included in applying permitting requirements such as the NSR requirements in Regulation 2, Rule 2. The Proposed Amendments seek to clarify exactly when fugitive emissions are included, especially in light of the fact that the District will be adopting its own PSD program, which has its own special provisions for treatment of fugitive emissions. The proposed revisions to Section 2-1-308 set forth a general presumption that fugitive emissions are included when applying the provisions of Regulation 2, except for when a more specific provision in the regulation establishes that they should not be included. This general provision will ensure that fugitive emissions must be included where required, but will allow for specific situations where fugitives are not included (for example, in determining whether a listed facility is over the 100 ton "major" facility threshold for PSD permitting requirements as set forth proposed Section 2-2-611).

14. Amendments to Definitions

The Proposed Amendments also revise the definitions set forth in the "200s" Sections of the Rule. These revisions include the following:

- **Particulate Matter Definitions**

The Proposed Amendments include a new definition of $PM_{2.5}$ to help implement the new permitting requirements for $PM_{2.5}$. In addition, the Proposed Amendments specify in the definitions of both $PM_{2.5}$ and PM_{10} that all particulate matter measurements must include both filterable and condensable emissions. These issues are addressed in detail in Section IV.A.2. above.

- **"Regulated Air Pollutant" Definition**

The Proposed Amendments also clarify the meaning of the term "Regulated Air Pollutant". "Regulated Air Pollutant" has a specific meaning for purposes of Title V permitting under Regulation 2, Rule 6 that excludes certain specific types of air contaminants. The specific definition that applies in the Title V context is specified in Section 2-6-222. Outside of the Title V context, the term "regulated air pollutant" is also used in various places in Regulation 2 simply to mean any pollutant that is regulated by District rules or other applicable regulatory provisions. (*See, e.g.*, Section 2-1-113.1.2, Section 2-1-319, *etc*.) The District is clarifying the general definition in Section 2-1-218 to make clear that the broader general term applies outside of the Title V context, and the specific definition in Section 2-6-222 applies for Title V purposes.

- **Moving Definitions to Appropriate Locations within Regulation 2**

The Proposed Amendments also move certain definitions that are used only in specific rules within Regulation 2 to the respective rules where they are used. Regulation 2, Rule 1 sets forth general requirements that apply to all permitting under Regulation 2, and the definitions in Rule 1 should therefore include general definitions of common terms that are used throughout Regulation 2. For terms that are specific to one of the individual permitting programs in Regulation 2 (e.g., NSR, Title V, etc.), it is more appropriate to define those terms in the specific rule in which the term is used. In some cases, similar terms are used in different rules to mean different things, and in such cases is can be very confusing to try to define such terms generally in Regulation 2, Rule 1. The Proposed Amendments will set forth the definitions for the various terms used in Regulation 2 in the location most appropriate for the term being defined.

The terms affected are the following:

Major Facility: "Major Facility" is a term that has different meanings in different contexts. It means one thing for purposes of NSR permitting under Regulation 2, Rule 2, and another thing for purposes of Title V permitting under Regulation 2, Rule 6. The Proposed Amendments therefore take the definition out of the general requirements in Regulation 2, Rule 1 and leave the term to the definitions provided in individual rule-specific definitions in Rule 2 (for NSR – Section 2-2-217) and Rule 6 (for Title V – Section 2-6-212).

Emission Reduction Credits: The term "Emission Reduction Credit" is also used to mean different things in different rules in Regulation 2. In Regulation 2, Rule 2, for example, it is defined to mean any emission reduction that is surplus, real, permanent, quantifiable, and enforceable and otherwise meets all of the applicable requirements in Regulation 2, Rule 2. In Regulation 2, Rule 9, however,

the term is defined to mean only emission reductions that are banked pursuant to Regulation 2, Rule 4. This latter definition would exclude unbanked contemporaneous onsite emission reductions, which can count as "emission reduction credits" as that term is used in Regulation 2, Rule 2. The Proposed Amendments therefore eliminate the general definition in Section 2-2-201 and leave definition of the term to the specific rules where it is used.

Reasonably Available Control Technology (RACT): This term is used only in Regulation 2, Rule 2, and it is defined there in Section 2-2-225. The additional definition in current Section 2-1-225 is therefore redundant and will be deleted.

Health Risk Screening Analysis (HRSA): The term "Health Risk Screening Analysis" is used in implementation of the toxics NSR permitting requirements in Regulation 2, Rule 5. The term is already defined there, in Section 2-5-211, and having an additional definition is redundant. The Proposed Amendments therefore delete the superfluous definition in current Section 2-1-225.

Major Facility Review: The term "Major Facility Review" is a term specific to Title V Major Facility Review permitting under Regulation 2, Rule 6. The proposed amendments therefore delete the superfluous definition in Section 2-1-129 and leave the definition to Section 2-6-213.

Synthetic Minor Operating Facility: "Synthetic Minor Operating Facility" is also specific to Title V permitting, and so the definition in Section 2-1-219 is being deleted to leave the operative definition in Section 2-6-231.

- **Deleted Definitions**

In addition, the Proposed Amendments also delete the definition of National Ambient Air Quality Standards (NAAQS) in Section 2-1-205. This definition is confusing because it is defined not only to include the NAAQS, but also the California ambient air quality standards. Defining this larger group of standards as "NAAQS" is confusing, because in common regulatory parlance "NAAQS" means only the federal standards, not the California standards. And the term "National Ambient Air Quality Standards" as it relates to only the federal standards does not need specific regulatory definition in Regulation 2, because it is already a well-defined term and is clearly understood in the regulatory community. The Proposed Amendments therefore remove this definition. There will be no substantive change in how Regulation 2 applies in this regard, however, because the Regulation will specifically identify both the California and National standards in every situation where it is important that both sets of standards be addressed.

The Proposed Amendments also delete the definition of "organic compound" in Section 2-1-206. This term is already defined in Regulation 1, which is a general definition that applies to all District Regulations. Duplicating the definition in Regulation 2 is redundant.

B. Proposed Amendments to Regulation 2, Rule 2 – New Source Review

Updating the New Source Review program in Regulation 2, Rule 2 is one of the central purposes of the Proposed Amendments. These important revisions include:

- Adding new NSR permitting requirements for $PM_{2.5}$.
- Adopting a District PSD Program for EPA Review and Approval.
- Other important substantive improvements, such as adding the new NAAQS protection requirement.

This section will discuss these proposed revisions to the NSR program, why the District needs to adopt them at this time, and how they will work in practice.

In addition, as noted above, the Proposed Amendments will also revise and reorganize the language and structure of the District's NSR Rule in a number of ways in order to make it clearer and easier to understand and implement. Because of this reorganization, the most efficient way to discuss the Proposed Amendments is not through a provision-by-provision review of each proposed change in turn. Instead, the following discussion is organized around the major elements of the NSR permitting program, and will focus on how each of them will be implemented through the Proposed Amendments. The following discussion therefore addresses the NSR rule (Regulation 2, Rule 2) in its entirety, highlighting the areas where substantive changes are being proposed, rather than going through the rule section number by section number. The discussion first addresses the two primary elements of NSR that apply to "major" facilities, the Non-Attainment NSR requirements and the PSD requirements. It then addresses the general NSR permitting requirements that apply generally for all NSR permits, as well as other related provisions such as procedural requirements, emission calculation procedures, emission monitoring provisions, and the like.

1. Non-Attainment NSR Requirements

This section addresses the "Non-Attainment NSR" requirements under Regulation 2, Rule 2. Non-attainment NSR is governed primarily by EPA's requirements set forth in 40 C.F.R. Section 51.165. EPA's regulations make the requirements applicable at facilities with a potential to emit above EPA's "major" facility threshold for non-attainment pollutants, which is 100 tons per year. California law makes several important requirements applicable at lower thresholds, and also imposes certain additional requirements as discussed below.

a) Pollutants to Which Non-Attainment NSR Requirements Apply

As noted above, Non-Attainment NSR applies to air pollutants for which the Bay Area has been designated by EPA as "non-attainment" of the National Ambient Air Quality Standards and to precursors to the formation of such pollutants. The District is designated as non-attainment for ozone and $PM_{2.5}$, and so the Non-Attainment NSR requirements apply to NOx and VOC (which are ozone precursors), and to direct $PM_{2.5}$ and to NOx and SO_2 (which are $PM_{2.5}$ precursors). Beyond these federal requirements, the District also applies the substantive requirements of Non-Attainment NSR to several other pollutants, for historical reasons and/or because of requirements of California law. Where the Non-Attainment NSR requirements apply to additional pollutants besides NOx, VOC, $PM_{2.5}$ and SO_2, they are specifically identified in the following sections.

In the context of Non-Attainment NSR for $PM_{2.5}$, it is important to note that there are two additional $PM_{2.5}$ precursors, VOC and ammonia (NH_3), that can contribute to the formation of $PM_{2.5}$. The District is concerned about the role that these precursors play in the Bay Area's $PM_{2.5}$ pollution challenges and is addressing them in its efforts to reduce $PM_{2.5}$ pollution.[40] District Staff are not proposing to include them as specific $PM_{2.5}$ precursors for purposes of the $PM_{2.5}$ NSR program, however. The primary reason is that EPA excludes these pollutants from the Non-Attainment NSR program unless the implementing agency provides a demonstration that emissions of these precursors constitute a significant contributor to the region's ambient $PM_{2.5}$ concentrations.[41] Although the District has found that these precursors are pollutants of concern because of their role as precursors to secondary $PM_{2.5}$ formation, the District does not yet have a sufficient understanding of the extent of the role that they play in influencing the Bay Area's regional $PM_{2.5}$ levels in order to make this finding and regulate them under the Non-Attainment NSR program. In addition, in the case of ammonia, the District does not have a fully comprehensive understanding at this point of the total universe of ammonia sources that would be affected by bringing them into the NSR program; and in the case of VOC, VOC is already regulated as an ozone precursor, and so the substantive requirements of NSR permitting already apply to VOC emissions regardless of whether they are included as a $PM_{2.5}$ precursor as well. For all of these reasons, the proposed amendments are not adding VOC and ammonia to the Non-Attainment NSR program as $PM_{2.5}$ precursors at this time. The District is considering VOC and ammonia in its other regulatory efforts to address $PM_{2.5}$, of course, and will continue to evaluate the role of these precursors in forming secondary $PM_{2.5}$ with a view bringing them into the Non-Attainment NSR program as $PM_{2.5}$ precursors in the future as appropriate. For purposes of the current updates to the NSR program, however, only SO_2 and NOx are treated as specific $PM_{2.5}$ precursors.

b) District "Best Available Control Technology" Requirement – Section 2-2-301

Non-Attainment NSR requires that any new major facility or major modification to an existing major facility must achieve the "Lowest Achievable Emissions Rate" (LAER) to control non-attainment pollutant emissions.[42] Air quality agencies in California use an equivalent level of emissions control that they call "Best Available Control Technology" (BACT).[43] EPA has determined that California BACT is equivalent to federal LAER, and so the District's current BACT regulation in Section 2-2-301 implements the federal LAER requirement. In addition, the California Health & Safety Code requires that the District implement California BACT (the equivalent of federal LAER) at any new or modified source with the potential to

[40] For further discussion of these efforts, see the District's recent publication "Particulates Matter: Understanding PM to Protect Public Health in the Bay Area", available at www.baaqmd.gov/Divisions/Planning-and-Research/Plans/PM-Planning.aspx.

[41] *See* Implementation of the New Source Review (NSR) Program for Particulate Matter less Than 2.5 Microns (PM2.5), Final Rule, 73 Fed. Reg. 28,321, 28,329-30 (May 16, 2008).

[42] *See* CAA Section 173(a)(2).

[43] *See generally* Health & Safety Code § 40405 (defining "Best Achievable Control Technology" as an emissions limitation that will achieve the lowest achievable emission rate for the source to which it is applied).

emit any non-attainment pollutant (or precursor) in an amount of 10 pounds or more per day.[44] Current Section 2-2-301 requires BACT at this level.

Staff are not proposing to change the substance of the BACT requirement in Section 2-2-301, except to add $PM_{2.5}$ as an additional pollutant subject to BACT (the equivalent of federal LAER) now that the Bay Area has been designated as non-attainment for $PM_{2.5}$.[45] The BACT requirement in Section 2-2-301 will apply to any source that has the potential to emit (PTE) 10 pounds or more per day of $PM_{2.5}$. The regulation will require the District to implement BACT (i) for any new source that has a PTE of 10 pounds or more per day; and (ii) any modification at a source with a PTE of 10 pounds or more per day that will result in any increase in $PM_{2.5}$ emissions (calculated as defined in Sections 2-2-603 and 2-2-604 using the "actual-to-potential" NSR applicability test, which is described in Section IV.B.3.g.i. of this Report).

Adding $PM_{2.5}$ as a pollutant subject to the BACT requirement is the only substantive change being proposed in Section 2-2-301. Adding a BACT requirement for $PM_{2.5}$ is required under the Clean Air Act as a result of the Bay Area's designation as non-attainment for the $PM_{2.5}$ NAAQS. The remainder of the proposed changes to the language of Section 2-2-301 involve rewording some of the language to make it clearer how the BACT requirement is to be applied. These clarifications address the following:

- The new language breaks out how BACT is to be applied (i) in the case of a new source (in proposed subsection 301.1) and (ii) in the case of a modification to an existing source (in proposed subsection 301.2). This separation is intended to make clear that for new sources, BACT applies where the source has a PTE of 10 pounds or more per day; and that for modifications to existing sources, BACT applies where there is <u>any</u> increase in emissions over the historical baseline (as determined under Sections 2-2-603 & 2-2-604), where the source (after the modification) has a PTE of 10 pounds per day or more. There is no requirement that the increase from the modification will be 10 pounds per day. As long as the source as a whole will have a PTE of 10 pounds per day, then any modification that will result in any increase over baseline will be required to implement BACT.
- The new language clarifies what was meant by sources with a potential to emit of "10.0 pounds or more per highest day . . . ." The District has always applied this 10 pound threshold to mean a source with a potential to emit of 10 pounds per day – that is, a source whose maximum possible emissions over the course of a full day, operating at its maximum technical and legal capacity, is 10 pounds per day. This concept is embodied in the definition of "potential to emit" (*see* Section 2-1-217), and the reference to PTE on the "highest day" was not intended to modify the PTE concept in any way. For example, it was not intended to refer in any way to the day on which the facility's actual emissions may have been the highest. The proposed amendments

[44] Health & Safety Code Section 40919(a)(2). This requirement applies for air districts with serious (or worse) non-attainment air pollution levels, as well as to up-wind districts such as the Bay Area.

[45] Note that the regulated precursors to $PM_{2.5}$, NOx and SO_2, which are also subject to the federal LAER requirement, are already addressed by the District's current BACT provision in Section 2-2-301. The only new pollutant that needs to be added as a result of the $PM_{2.5}$ non-attainment designation is direct $PM_{2.5}$.

therefore remove the reference to "highest day" in favor of emphasizing that the 10-pound BACT threshold is based on PTE, as defined in Regulation 2-1-217.

- The new language creates a new defined term "District BACT pollutant", which is defined in proposed Section 2-2-210 to include the list of pollutants that are subject to the BACT requirement. This list of pollutants – which currently includes POC, NPOC, NOx, SO_2, PM_{10} and CO, and which will now have $PM_{2.5}$ added to it as well – is getting quite long, and it is somewhat unwieldy to have to recite it in the language of Regulation 2-2-301. The Proposed Amendments therefore define the new term "District BACT pollutant" to include all of the pollutants on this list, and then simply reference that term in Regulation 2-2-301 where it refers to the specific pollutants that are covered by the District BACT requirement.
- The new language clarifies that the BACT requirement applies "on a pollutant-specific basis." BACT does not necessarily apply to all pollutants that may be emitted by a source. Rather, for new sources it applies only to those pollutants where the source's PTE is 10 pounds per day or more; and for modified sources it applies only to those pollutants for which the source was "modified" under the definition of modification in Section 2-1-234 and for which there is an increase in emissions from the modification as calculated in accordance with Sections 2-2-603 and 2-2-604 (implementing the "actual-to-potential" applicability test described above). The District has historically applied BACT on a pollutant-specific basis, but the regulatory language has not clearly specified what that means. The revisions will now explicitly state that BACT applies on a pollutant-specific basis and will clearly specify what that means. The Proposed Amendments also include a definition of "pollutant specific basis" in proposed Section 2-2-222.
- The new language clarifies that the APCO has a duty to implement BACT permit conditions in the authority to construct and/or permit to operate for any new source or modification subject to Regulation 2-2-301. The current language of Section 2-2-301 states that the applicant shall apply BACT, but does not explicitly state that BACT needs to be implemented as legally-binding conditions in the permit for the new source or modification.

Note that the Proposed Amendments also include an update to the District's definition of BACT in Section 2-2-202 to clarify how this important requirement will be determined. The BACT definition is discussed in more detail in Section IV.B.3.h. of this Report.

c) Offsets Requirements – Sections 2-2-302 and 2-2-303

Non-Attainment NSR also requires that that before any new major facility or major modification to an existing major facility can receive an NSR permit, the owner or operator of the proposed new source or modification must provide emissions "offsets" to ensure that emissions from existing sources are reduced by a sufficient amount such that total regional emissions will make "reasonable further progress" towards attainment.[46] The California Health & Safety Code contains a similar offsets

[46] *See* CAA §§ 173(a)(1)(A) & 173(c).

requirement designed to ensure a "no-net-increase" in emissions of non-attainment pollutants from facilities subject to the requirement. This California offsets requirement mandates that emissions from existing sources must be reduced to compensate for any new NOx or POC emissions increases from any new or modified with a potential to emit 10 tons or more per year.[47]

The District's current offset requirements are set forth in Sections 2-2-302 (for NOx and POC) and 2-2-303 (for PM_{10} and SO_2). The most significant update to these requirements in the proposed amendments is the addition of offset requirements for $PM_{2.5}$, which is required as a result of the Bay Area's designation as non-attainment of the $PM_{2.5}$ NAAQS. The proposed amendments also make a few other more minor changes to reflect other EPA requirements for offsets, as well as revisions to the regulatory language to make it clearer and easier to understand. All of these changes are discussed below.

i. Section 2-2-302: NOx and POC Offsets

Current Section 2-2-302 contains the offset requirements for NOx and POC. It requires that in order for a facility with NOx or POC emissions over 10 tpy to obtain a permit for a new or modified source at the facility, the applicant must provide offsets for any new emissions increases that will result from the project (net of any contemporaneous onsite emission reduction credits). For facilities with emissions between 10 tpy and 35 tpy, offsets must be provided at a 1:1 ratio to offset new emissions increases from the project, and they may be provided by the District on the applicant's behalf from the District's small facility banking account (if offset credits are available there). For facilities with emissions of 35 tpy or more, offsets must be provided at a 1:1.15 ratio to offset new emissions increases from the project, and the small facility banking account cannot be used. In addition, facilities with emissions of 35 tpy or more must reimburse the District's small facility banking account for any credits the District previously provided from that account before they can receive permits, and the regulation provides a procedure for reimbursement to be accomplished by accepting enforceable emissions limits on existing sources to lower the emissions levels for which those credits were provided. Current Section 2-2-302 also allows POC credits to be used to offset NOx emissions increases.

Under current Section 2-2-302, the amount of NOx and POC offsets that must be provided (before applying any offset ratio) is calculated by adding the following:

(i) the increase in emissions that will result from the new source or modification being permitted; *plus*

(ii) any preexisting cumulative increase in emissions that occurred as a result of prior permits issued for the facility since the cumulative increase baseline date of April 5, 1991; *minus*

(iii) any contemporaneous onsite emissions reduction credits at the facility.

The concept embodied in this requirement is that all increases in the facility's potential to emit NOx and VOC that have occurred as a result of permits issued since the 1991 baseline date will be offset (at the

[47] The 10 ton-per-year offsets threshold for ozone precursors applies to the District under ARB's regulations for ozone transport because of the non-attainment status of air districts downwind from the Bay Area. See 17 Cal. Code Regs. 70600(b)(2)(C).

appropriate offset ratio) by corresponding emissions reductions elsewhere – either by contemporaneous onsite emission reduction credits, or by banked credits. Contemporaneous onsite emission reduction credits are credits from the shutdown (or reduced operation) of other sources at the same facility that have occurred within the five years prior to the new project seeking to take credit for the past shutdown.[48] Banked credits (offsets) are credits that a facility operator documented to the District and had the District approve through the issuance of a banking certificate. Such banked credits may be from shutdowns of other sources that occurred more than five years in the past, and they may be from shutdowns at different facilities from the facility where they are used. The fact that the District confirmed and documented the extent of such credits through the issuance of a banking certificate makes the credits reliable for use in offsetting new emissions increases even if they may be more than five years old or may be from a different facility. For emission reduction credits that have not been banking in this way, Section 2-2-302 allows them to be used only if they are less than 5 years old (i.e., "contemporaneous") and are from the same facility (i.e., "onsite"). By ensuring that all permitted increases since the 1991 baseline date – what the regulations refer to as the facility's "cumulative increase" – are offset by corresponding decreases from other sources, the offset requirements ensure that there is no net increase in NOx and POC emissions from sources subject to these requirements after that date.[49]

It is also worth noting that the offset requirements apply to the source's total potential to emit (PTE), which may be greater than what the source actually emits in practice. That is, where a new source or modification will increase the facility's maximum potential emissions, the regulations conservatively assume that facility will actually emit the full amount of its PTE and require offsets to be provided for that full amount (above the facility's historical background emissions levels), even if the facility may not actually put out its full potential emissions. In this respect, the offsets requirement uses the "actual-to-potential" test discussed above in connection with the BACT requirement in Section 2-2-301. Offsets are provided based on increases in potential to emit over historical background emissions levels to ensure an overall "no net increase" in emissions. The Proposed Amendments include detailed provisions on calculating the amount of offsets required in Sections 2-2-605 through 2-2-608; these provisions are discussed further in Section IV.B.3.g.iv. of this Staff Report.

The proposed revisions to Section 2-2-302 make one substantive change to these requirements, eliminating the provision in current Section 2-2-302.2 allows POC credits to be used to offset NOx emissions increases. This provision is being eliminated for two reasons. First, it is no longer clear that POC credits benefit air quality more than NOx credits. The provision was created in the context of POC

[48] "Contemporaneous" is defined in current Section 2-2-242 as occurring within the five years immediately prior to the permit application for the project for which the emission reduction credit will be used. The Proposed Amendments will retain this 5-year limitation on the use of historical emission reductions from past projects that were not banked. See proposed Section 2-2-206 (the provision has been renumbered because the Regulation 2, Rule 2 definitions are being reorganized into alphabetical order).

[49] Note also that because of the increased offset ratio for certain facilities, there will actual be a net decrease in emissions under this requirement.

and NOx as ozone precursors, and was designed to encourage POC reductions in preference to NOx reductions in recognition of the fact that ozone formation in the Bay Area is POC-limited.[50] But NOx is also a $PM_{2.5}$ precursor, and from a $PM_{2.5}$ perspective this same rationale does not apply. It is not clear that POC reductions are preferable to NOx reductions when it comes to $PM_{2.5}$ formation, and in fact the situation may be the opposite. Second, POC/NOx trading is no longer allowed under EPA's NSR regulations. EPA's requirements governing inter-pollutant trading for non-attainment pollutant precursors are set forth in 40 C.F.R. Section 51.165(a)(11), and they allow inter-pollutant trading only for $PM_{2.5}$ under certain specific conditions as specified in that paragraph – and not for POC and NOx. For both of these reasons, the Proposed Amendments remove the POC/NOx inter-pollutant trading provision in current Section 2-2-302.2.

Beyond this substantive change, the proposed revisions also make a number of non-substantive changes that clarify and expand in several respects on how the offsets requirement is to be interpreted and applied. These changes are intended to set forth explicitly and in detail how offsets work, in order to address areas where the current regulatory language is silent or ambiguous. The revised Section 2-2-302 will do so as follows:

- Proposed new Section 2-2-302 begins with an explicit statement that an authority to construct or permit to operate cannot be issued for any facility with a PTE over 10 tons per year of NOx or POC unless offsets have been provided according to the section's specific requirements in subsections 302.1 through 302.5. The new language removes references to Section 2-2-213 and 2-2-421, which the current rule refers to as "exceptions" to the offset requirements for facilities with a PTE of 35 tpy or more. Section 2-2-313 was deleted in 2000 and so this reference is redundant. Section 2-2-421 was an exception that allowed certain facilities to defer providing the required offsets until a future date under certain circumstances. This deferral provision was originally created for administrative convenience so that District staff and permit applicants would not have to mail physical documents back and forth frequently when only small amounts of offsets were at issue. With modern email communications, Staff have now found that this deferral provision creates more inconvenience than its saves, and so the Proposed Amendments will eliminate it. The Proposed Amendments therefore do not include the deferral provision in current section 2-2-241, and there is no reference to it in proposed 2-2-302.
- Proposed new Section 2-2-302.1 provides the offset rules for facilities with a PTE for NOx and/or POC between 10 tpy and 35 tpy. Offsets must be provided at a 1:1 ratio for any "un-offset cumulative increase", which means any cumulative increase at the facility since the cumulative

[50] "POC limited" means that there is additional NOx in the atmosphere compared to POC, so that the chemical reaction that forms ozone can continue up until all the available POC is used up. Since there is additional NOx available, obtaining reductions in NOx is not as important as obtaining reductions in POC, because removing POC from the atmosphere will reduce the potential for ozone formation in a way that removing NOx will not. The fact that the Bay Area is POC-limited was the basis on which the District adopted its provision allowing POC credits to be used to satisfy NOx offset requirements, because at the time the District preferred to get POC reductions and the additional ozone-reduction benefit associated with them, as compared to getting the same amount of NOx reductions.

increase baseline date (April 5, 1991, for NOx and POC) for which offsets have not already been provided in connection with prior permits. The new language references the detailed procedures for determining the amount of this un-offset cumulative increase in the proposed new Section 2-6-608. The current provisions in Section 2-2-302 are silent and ambiguous on exactly how the amount of such offsets is to be determined, and new Section 2-2-608 (and related provisions) will provide some much-needed clarity in this area. (See Section IV.B.3.g.iv. of this Staff Report below for further, detailed discussion of these calculation procedures.)

Subsection 2-2-302.1 also provides additional specificity on how offsets can be provided from the District's Small Facility Banking Account, in Subsections 2-2-302.1.1 through 2-2-302.1.3. These provisions make clear that the APCO shall provide the offsets if there are sufficient credits in the Small Facility Banking Account and if the applicant (or any entity under related ownership) does not already own or control such offsets. If the Small Facility Banking Account is exhausted, or the applicant owns or controls sufficient offsets itself, then the applicant must provide them. Subsection 2-2-302.1.3 also provides that an applicant cannot request an artificially high emissions limit simply to get more offsets from the Small Facility Banking Account. This would be an abuse of the purposes the Small Facility Banking Account was designed to serve, and so emissions limits that will be offset by Small Facility Banking Account credits may not be higher than the applicant will reasonably need (including a reasonable margin to allow for foreseeable future growth and similar changes), and in no event higher than the source's maximum physical or design capacity.

- Proposed new section 2-2-302.2 provides the offset rules for facilities with a PTE for NOx and/or POC of 35 tpy or more. If the facility will have a PTE over 35 tpy after the authority to construct or permit to operate is issued, then it must provide offsets according to Section 2-2-302.2. The facility must first provide offsets to reimburse the District's Small Facility Banking Account for any offsets the District has provided from that Account in the past for projects at the facility. This reimbursement must be made at a 1:1 ratio for any offsets provided from the account (*e.g.*, if the facility obtained 20 tpy in offsets from the Account in the past, it must reimburse the Account with 20 tpy). The facility must then provide offsets for any new cumulative increase that will result from the authority to construct/permit to operate that has not already been offset (i.e., "un-offset cumulative increase" calculated according to Section 2-2-608) at a 1:1.15 ratio. This ratio applies to the entire new increase, not just the portion of the new increase above 35 tpy. Thus, if a facility has a PTE of 30 tpy NOx and applies for a modification that will increase PTE to 40 tpy NOx and thereby generate an un-offset cumulative increase of 10 tpy, the entire 10 tpy increase must be offset at the 1:1.15 ratio, not just the 5 tpy that will be above the 35 tpy PTE threshold. In this scenario, the facility must provide 11.5 tpy of NOx offsets [10 tpy x 1.15], not 10.75 tpy [(5 tpy x 1) + (5 tpy x 1.15)].
- Proposed new section 2-2-302.3 provides more detail on the procedures in the current rule for reimbursement of the Small Facility Banking Account by adjusting an existing source's cumulative increase (which are addressed in current Section 2-2-302.3). Under the current rule (and under the proposed revision), a source can accept a lower emissions limit in a prior permit

for which offsets were provided from the Small Facility Banking Account. With a lower emissions limit, the cumulative increase associated with that prior permit will be less than it was at the time the offsets were provided from the Small Facility Banking Account, and so fewer offsets would be required in connection with that prior permit than were provided at the time of issuance. This will create, after the fact, what is effectively an "overpayment" by the Small Facility Banking Account in connection with that prior permit. The amount of such "overpayment" created by adjusting the cumulative increase associated with the prior permit can then be credited back to the Small Facility Banking Account as a way to reimburse that Account. The language in proposed Section 2-2-302.3 specifies the procedures for an applicant to request such an adjustment, for the APCO to review and approve it, and for the Small Facility Banking Account to be reimbursed upon approval.

- Proposed new section 2-2-302.4 states the provision contained in the current rule that the NOx and POC offset requirements are to be applied on a pollutant-specific basis. The proposed revisions also include a new definition of "pollutant-specific basis" to make clear what this concept means, in proposed Section 2-2-222. With respect to NOx and POC offsets, this means that the NOx and POC offsets are calculated independently of each other. A facility may be in the 0-10 tpy, 10-35 tpy, or 35+ tpy category for NOx and have its NOx offset requirements calculated accordingly (i.e., no offsets required, offsets required at a 1:1 ratio, or offsets required at a 1:1.15 ratio), and may be in a completely different category for POC if its POC emissions are different. A facility's NOx offset requirements are determined by its NOx emissions only and not its POC emissions, and vice versa.

These detailed procedures will provide needed clarity and specificity in how the NOx and VOC offsets requirements are to be implemented.

ii. Section 2-2-303: SO_2 and Particulate Matter Offsets

Current Section 2-2-303 sets forth similar requirements for SO_2 and PM_{10}; although for these pollutants, offsets are not required until a facility's PTE reaches 100 tpy, offsets are not required at any ratio above 1:1, and there is no small facility bank provision, among other differences. The 100 tpy PTE threshold is currently specified in the language making the provision applicable to facilities over the 100 tpy "Major Facility" threshold (which is set forth in the "Major Facility" definition in current Section 2-1-204); as well as in the observation that a facility with a PTE below the 100 tpy threshold can voluntarily provide offsets but is not required to. The first sentence of the section states the section's basic requirement, which is that new or modified SO_2 and PM_{10} sources at major facilities must provide offsets, at a 1:1 ratio, for (i) the increase in emissions from the new or modified source being permitted, plus (ii) any pre-existing cumulative increase since the April 5, 1991, cumulative increase baseline date, minus (iii) any contemporaneous onsite emission reduction credits.

This language embodies the same concept as with the NOx and POC offsets provision in 2-2-302 described above: For facilities over the threshold levels, offsets must be provided for all increases in the facility's PTE (over historical actual emissions levels) for SO_2 and PM_{10} resulting from any permits issued since 1991, net of any contemporaneous onsite emission reduction credits that were provided in

connection with any such permits when they were issued. There is a slight difference in that offsets do not need to be provided in cases where the cumulative increase since the 1991 baseline date is less than 1 tpy. This provision was adopted to avoid the administrative hassles of providing offsets in situations involving only very minor changes at a facility where the amount of emissions at issue is very small. Once the cumulative increase exceeds 1 tpy – either because of a single, large increase or because of the cumulative total of a series of small increases – then the offset requirement is triggered and the cumulative total of all such increases needs to be offset. Other than this minor difference, the mechanics of the offset requirements for SO_2 and PM_{10} for facilities with a PTE of those pollutants over 100 tpy are very similar to the NOx and POC offset requirements described above.

In addition, current Section 2-2-303 provides that NOx and SO_2 offsets may be used to fulfill PM_{10} offset obligations. The provisions for doing so are set forth in current Section 2-2-303.1. The APCO can allow such substitution on a case-by-case basis by determining the appropriate amount of NOx and/or SO_2 offsets that need to be required in order to result in a net air quality benefit. The APCO's determination needs to include adequate modeling, and the APCO must (i) provide public notice of and an opportunity to comment on the determination and (ii) obtain EPA's concurrence.

The proposed revisions to Section 2-2-303 make several changes to the current requirements. The most significant change is to add offset requirements for $PM_{2.5}$ in recognition of the Bay Area's designation as non-attainment of the 24-hour $PM_{2.5}$ NAAQS. Now that the Bay Area is non-attainment for $PM_{2.5}$, offsets need to be required for major sources of $PM_{2.5}$ emissions.[51] The Proposed Amendments will add $PM_{2.5}$ to the list of pollutants for which offsets are required, in addition to PM_{10} and SO_2. $PM_{2.5}$ offsets will be required in the same manner as with PM_{10}.

Beyond adding this new $PM_{2.5}$ offset requirement, the Proposed Amendments do not make any substantive revisions to current Section 2-2-303. The Proposed Amendments retain the existing requirement to provide offsets for PM_{10}. This requirement will apply in addition to the new requirement to provide offsets for $PM_{2.5}$. Since $PM_{2.5}$ is a subset of PM_{10}, reductions in PM_{10} emissions will also constitute reductions in $PM_{2.5}$ emissions, and in many cases an applicant will be able to use the same PM reduction to satisfy both PM_{10} and $PM_{2.5}$ offsets requirements. Further discussion for how the mechanics of the offsets requirements would work in such a situation is provided in Section IV.B.3.g.

The Proposed Amendments also retain the existing inter-pollutant trading provisions that allow NOx and SO_2 credits to be used to satisfy PM_{10} offset requirements. Staff are not proposing to eliminate this trading provision in the existing regulation because it requires that there be a demonstrated overall air quality benefit in order for such trading to be used. This demonstration of an air quality benefit – which

[51] Note also that offsets are required for $PM_{2.5}$ precursors NOx and SO_2. The District's offset requirements already apply to these pollutants in their own right, so the District does not need to add any new requirements with respect to these pollutants.

must be subject to public review and participation and EPA approval – will alleviate any concerns that inter-pollutant trading among PM_{10} precursors may not actually be beneficial.[52]

In addition, the Proposed Amendments clarify and expand in several respects on how the offsets requirement is to be interpreted and applied. These changes are intended to set forth explicitly and in detail how offsets work, in order to address areas where the current regulatory language is silent or ambiguous. All of the changes are summarized below:

- Proposed new Section 2-2-303 begins with an explicit statement that an authority to construct or permit to operate cannot be issued for a facility with a PTE of 100 tpy or more of $PM_{2.5}$, PM_{10}, or SO_2 unless offsets have been provided according to the section's specific requirements in subsections 303.1 through 303.4.
- Proposed new Section 2-2-303.1 sets forth the requirement that once the cumulative increase exceeds 1 tpy, offsets must be provided for any un-offset cumulative increase since the baseline date in accordance with the calculation procedures in Section 2-2-608. The concepts embodied in Section 2-2-608 and the determination of the un-offset cumulative increase are the same as for NOx and POC offsets described above. The provision for allowing very small increases to be deferred until the cumulative increase reaches 1 tpy is the same as exists in the current regulation.
- Proposed new section 2-2-303.2 sets forth the provisions for providing NOx and/or SO_2 offsets to satisfy PM_{10} offset obligations under the rule. The procedures are substantively identical to those provided under the current rule. Note that that these procedures apply to PM_{10} offset requirements only; no substitution is allowed for compliance with the $PM_{2.5}$ offset requirements.
- Proposed new section 2-2-303.3 clarifies that any NOx and/or SO_2 offsets provided to satisfy PM_{10} offset requirements under subsection 303.2 must be provided in addition to any NOx or SO_2 offsets required independently because of NOx or SO_2 emissions. This provision ensures that where a source emits both direct PM emissions and PM precursor emissions, it does not use the same offset to counteract both of these contributions to ambient PM concentrations. In such a case, the source must ensure that it is providing sufficient offsets to counteract all of its emissions that contribute to air pollution.
- Proposed new section 2-2-303.4 provides that the offset requirements in Section 2-2-303 are to be applied on a pollutant-specific basis. This provision serves the same purpose as Section 2-2-302.4 described above for NOx and POC.

These procedures will specify how the PM and SO_2 offsets requirements work with greater clarity and specificity than under the current version of Section 2-2-303.

[52] Note also that the Bay Area is not non-attainment for PM_{10} and so the restrictions in 40 C.F.R. § 51.165(a)(11) that limit inter-pollutant offset trading for precursors do not apply for PM_{10}.

iii. Accounting for Cargo Carrier Emissions and "Related Source" Emissions

Under the Air District's current offsets provisions, offsets must be provided for any emissions from cargo carriers associated with the facility, and offsets must be provided for "related sources", which are sources at different facilities but whose operation depends upon, supports or affects the operation of the facility. The Proposed Amendments will not change these requirements substantively, but will move them to a more appropriate location within the Rule.

These requirements are currently specified in the definition of "Facility" in Section 2-2-215. This is not the most appropriate location within Regulation 2, Rule 2 to specify these requirements, because strictly speaking they are not attributes of the definition of "facility". To the contrary, they are requirements for calculating the amount of cumulative increase at a facility that needs to be offset under Sections 2-2-302 and 2-2-303. The Proposed Amendments therefore move these provisions from the "Facility" definition and place them with the calculation procedures for determining the amount of offsets that are required for a facility. They will be in proposed Sections 2-2-610 and 2-2-611, respectively, and are discussed in more detail in Section IV.B.3.g.v. of this Staff Report.

iv. Policy Considerations Regarding the Use of Emissions Banking in Implementing the Offsets Requirements

Finally, certain policy considerations regarding the use of emissions "banking" as part of the Air District's NSR program were raised during the rule development process, and it is important to address them here.

The District implements the offsets requirements in its NSR program using a system of emissions "banking", under which the emission reductions that result when an existing source is shut down can be "banked" for future use. That is, the owner of the source that is shut down can apply to the District to have the emission reductions "banked" by the District in its emissions accounting system, and then can either (i) use those "banked" reductions to offset new emissions when it expands its own facility in the future, or (ii) sell the "banked" emission reduction credits to some other facility for use in offsetting new emissions at that other facility. This use of emissions banking is central to the system of New Source Review created in the Clean Air Act;[53] and it has been the mechanism through which the District implements its NSR program for many years in order to provide flexibility in how old sources are shut down and new sources are built, consistent with the program's clean air goals. District staff have not proposed changing this element of the District's existing NSR program, and are proposing to have it apply to the new offset requirement for $PM_{2.5}$ that is being added.

[53] The offset requirement was created under CAA Section 173, which explicitly provides that new and modified sources can comply with offset requirements by obtaining emission reductions from the same source "or other sources in the area." CAA § 173(c)(2). In creating this requirement, Congress recognized that requiring all offsets for new and modified facilities to be obtained from emission reductions at the same facility would be inflexible and unworkable. EPA's implementation regulations similarly reflect this central element of NSR under the Clean Air Act. *See* 40 C.F.R. Part 51, Appendix S, Section IV.C.5 (" 'Banking' of emission offset credit.").

During the rule development process, the District received comments stating that allowing facilities to use banked emission reduction credits to offset new $PM_{2.5}$ emissions increases could be problematic. The comments stated that using banked emission reduction credits can allow for local increases in emissions, while only requiring reductions elsewhere where the benefits may not accrue in the local area where the new increase will occur. The comments cited environmental justice concerns regarding the use of banked credits, and suggested that the District should abandon the use of banking and trading of emission reduction credits for compliance with the $PM_{2.5}$ offset requirements.

Achieving equity in implementing its regulatory programs is one of the Air District's core values, and District Staff have carefully considered these concerns in developing the Proposed Amendments. Based on this policy review, District Staff have concluded that it is important to retain emissions banking for implementation of the NSR offsets requirements, for two major reasons. First, the offsets program needs the flexibility provided by emissions banking in order to function effectively. Second, there are a number of other requirements in the District's regulations – some of which are being strengthened through these Proposed Amendments – that will help ensure that local communities are not significantly impacted in cases where banked credits are used.

There are a number of reasons why the flexibility provided by banking emissions reductions is necessary for achieving the overall goals of the NSR program. First and foremost, allowing banking of voluntary emission reductions provides an incentive for facilities to shut down existing operations and take credit for the resulting emission reductions. Without banking, a facility would have an incentive to delay such shutdowns so that the reductions could be used in future offset situations. With banking, a facility can shut down an under-utilized source immediately and bank the reductions, knowing that it will not lose the benefit of such reductions if they are needed in the future to offset a subsequent expansion. Banking also allows for future growth and development while at the same time ensuring protection of the NAAQS and related air quality goals. Without banking, no new sources subject to the offset requirements could be built except in the same location where an existing source is located that could be shut down to allow for the new source. This would remove any ability for the Bay Area to locate any such sources except in locations where sources are already present. Moreover, banking allows this flexibility without jeopardizing attainment and maintenance of the NAAQS, because all such banked credits are accounted for in the District's planning analyses as if the emissions were still being emitted. The District's control strategy for attaining the NAAQS is therefore not impacted in any way depending on whether emissions banking is allowed or not.

Moreover, this system of emissions banking is implemented in conjunction with a number of other safeguards that ensure that the use of banked credits will not allow any significant adverse air impacts in any community, including environmental justice communities. Even where a new or modified source is built using banked emission reduction credits that were generated by a shutdown at some other location, these safeguards will be in place to protect air quality and public health at the location where the new or modified source is built. These safeguards include the District's Toxics New Source Review requirements in District Regulation 2, Rule 5, which require that new and modified sources demonstrate that they will not have any significant adverse toxic health impacts on any nearby sensitive receptors. In addition, for criteria pollutants, the Proposed Amendments include a new requirement for all new and

modified sources to demonstrate that they will not result in ambient air concentrations above any National Ambient Air Quality Standard.[54] This additional requirement will further ensure that the use of banked emission reduction credits will not allow any source to cause significant environmental impacts in any community. And these District requirements will work in conjunction with other legal safeguards such as CEQA, the California law aimed at protecting communities from significant adverse environmental impacts.

For all these reasons, District Staff are not proposing that the District should abandon its long-standing policy of implementing the NSR offsets requirement through an emissions banking system. Emissions banking is necessary for effective implementation of the offsets requirements, and it will be implemented with multiple safeguards to ensure that public health is protected in impacted communities. The Proposed Amendments therefore retain the emissions banking provisions that have served the Bay Area for many years, and make them applicable to the new $PM_{2.5}$ offsets requirements being added to the program.

d) Compliance Certification – Section 2-2-309

Non-Attainment NSR requires that before any new major facility or major modification to an existing major facility can receive an NSR permit, the owner or operator of the proposed new source or modification has demonstrated that all major sources in California under the owner or operator's control are in compliance (or on a schedule for compliance) with all applicable emissions standards and limitations.[55] The District's current NSR rule requires such a compliance demonstration in Section 2-2-307, which provides that the applicant must certify compliance under penalty of perjury, and must provide evidence to support the certification upon request, in order to receive an Authority to Construct for a new major facility or a major modification to a major facility. The District is proposing to retain this requirement in a substantively identical form. The requirement would be moved to Section 2-2-308 under the proposed reorganization of Regulation 2-2.

e) Alternatives Analysis

Non-Attainment NSR requires that before any new major facility or major modification to an existing major facility can receive an NSR permit, an analysis must be undertaken comparing the benefits of the proposed source with the environmental and social costs that would result from its location, construction or modification.[56] The District's current NSR regulations require such an analysis to be conducted in conjunction with any application for a new facility or modification with an emissions increase above specified threshold trigger levels of CO, POC and NOx emissions. This requirement is in current Section 2-2-401.1. The District is proposing to retain this requirement in proposed Section 2-2-

[54] This requirement, in proposed Section 2-2-308, will apply for all new and modified sources that will increase emissions by more than *de minimis* amounts. See Section IV.B.3.a. of this Staff Report for further discussion.

[55] *See* CAA § 173(a)(3).

[56] *See* CAA § 173(a)(5)

401.3. The new requirement will be essentially the same, although the language will clarify that the requirement applies to new major facilities (as defined in Section 2-2-217) and to major modifications of major facilities that will cause a significant increase in any Non-Attainment pollutant (or precursor). The specific list of pollutants identified in the requirement will also be expanded, because currently it does not include all Non-Attainment pollutants and precursors. Currently, $PM_{2.5}$ and SO_2 are not included as pollutants subject to this requirement, but they need to be included because of the Bay Area's non-attainment designation for $PM_{2.5}$. This is the only substantive change to this requirement; other than that, the only revision is to change the sub-section numbering of this requirement from 2-2-401.1 to 2-2-401.3 because two new informational requirements are being added in 2-2-401.1 and 2-2-401.2.

It is also important to note that this Non-Attainment NSR alternatives analysis is similar – although by no means identical – to the alternatives analysis requirements contained in the California Environmental Quality Act (CEQA). Given the similarity of the Non-Attainment NSR alternatives analysis and the CEQA alternatives analysis, District staff envision that these two analyses for any particular project will most likely be carried out at the same time and by the same person on behalf of the applicant (e.g., by environmental compliance staff or an environmental consultant). This is an appropriate approach and may conserve applicants' resources, as long as it is done properly (*i.e.*, applicants and their consultants will need to ensure that they address both of the requirements independently and ensure that they are both fully satisfied, even if some elements of the analyses will overlap). The proposed revisions therefore list the CEQA-related information requirements and the Non-Attainment NSR alternatives analysis requirements next to each other in subsection 401.3 in the list of application requirements, separated by a semicolon to indicate that they are two separate and distinct legal requirements. Permit applicants may elect to address these two requirements jointly, but are cautioned to make sure that they satisfy all respective elements of these two legally distinct permitting requirements.

f) Procedural Requirements

Non-Attainment NSR permitting for "major" facilities requires that permits must go through a public participation process whereby interested members of the public are provided with notice of any proposed issuance of a permit and an opportunity to comment on the proposal before final issuance. The "major" Non-Attainment NSR requirements in 40 C.F.R. Section 51.165 do not establish any special additional requirements for "major" facilities, however, above the notice-and-comment requirements that apply generally to NSR permitting under 40 C.F.R. Section 51.161. These general NSR notice-and-comment requirements are addressed in Section IV.B.3.c. below, and will apply to "major" Non-Attainment NSR permits as well as non-"major" permits.

2. Prevention of Significant Deterioration (PSD) Requirements

The second major element of the NSR program is Prevention of Significant Deterioration, or PSD. As noted above, the Proposed Amendments will create a District PSD program that will satisfy the Clean Air Act's requirements for PSD permitting and will be approvable by EPA for that purpose. Although the Air District has adopted requirements aimed at implementing PSD requirements, for historical reasons the District has never obtained EPA approval for a District-implemented PSD program. The proposed

amendments will create a District PSD program that will be submitted for EPA review and approval, which will allow the District to implement the PSD program for facilities in the Bay Area. Obtaining EPA approval for a District-administered PSD program will simplify and streamline permitting of major facilities by having a single set of permitting regulations – those in the District's NSR rule in Regulation 2, Rule 2 – govern all NSR permitting requirements for major facilities, instead of having NSR split between District regulations for some pollutants and federal regulations for other pollutants.

a) General Approach: Incorporation by Reference of the Substantive Elements of the Federal PSD Program

The general approach that District Staff are recommending for adopting an approvable PSD rule is to incorporate by reference the substantive elements of EPA's federal PSD program. EPA has a well-developed PSD program that has benefitted from many years of implementation experience. Adopting appropriate elements of this federal program by reference will provide the District with a workable and effective PSD program. Several other air districts in California have adopted versions of this "incorporation-by-reference" approach, with the approval of EPA, ARB, and CAPCOA.

Staff are not proposing to incorporate all elements of the federal program, however. There are certain aspects of EPA's federal PSD permitting program that would not be appropriate for the Bay Area. For example, as explained in the next section, the District has always based the applicability of its NSR permitting program on enforceable permit limits. This is different than the applicability test under federal program, which EPA recently revised to be based only on a facility's unenforceable projections of what its future emissions may be. Relaxing the District's NSR applicability standards to that they are based on unenforceable emissions projections, rather than enforceable emissions limits, would not provide for effective air pollution regulation. Furthermore, the District is legally prohibited under State law from relaxing its applicability test (in most cases) to reflect EPA's less stringent test. The proposed amendments therefore create District-specific procedures for elements where the District differs with EPA's federal program (in particular, the applicability provisions), and incorporates the federal procedures by reference where those procedures are appropriate for use in the Bay Area (i.e., the substantive requirements for PSD review). This type of hybrid incorporation-by-reference of the federal PSD program is consistent with the approaches adopted by other air districts that have been approved by EPA, ARB, and CAPCOA.

The proposed revisions therefore create a District-specific applicability test for PSD permitting. Under this applicability test, PSD permitting requirements will be triggered for "PSD Projects", a term that is defined in proposed Section 2-2-224 and is discussed in more detail in Section IV.B.2.b. of this Report below. New sources and modifications to existing sources that trigger PSD permitting requirements because they fall within the definition of "PSD Project" will then be subject to all of the substantive elements of the PSD program. Each substantive element is set forth in a specific section of the proposed regulations, in proposed Sections 2-2-304 through 2-2-307. Each of those specific PSD provisions states that the authority to construct for the PSD Project must implement that element of the PSD program, and then incorporates the provisions of EPA's program for that particular element by reference. In this

way, all of the detailed requirements for each element of EPA's federal PSD program will become applicable to PSD Projects under the District's program, and the District will implement each such element as part of its permit review for PSD Projects. (Each specific element is discussed in more detail in the following sections of this Report.)

This approach will also help in ensuring clarity in how the District's PSD program works. Anyone seeking to understand how the PSD program applies to a particular project – including District permitting staff, regulated facilities applying for a permit, and interested members of the public seeking to understand a proposed permitting action during the public comment period, among others – will be able to look to the definition of "PSD Project" in Section 2-2-224 to see if the PSD requirements are triggered for the project. If so, they will then be able to look to sections 2-2-304 through 2-2-307 to see the specific PSD permitting requirements applicable to the project. Each of those specific sections will state that the project has to comply with the applicable PSD requirement, and will refer to and incorporate the details of that requirement as set forth in the Code of Federal Regulations for the specifics of what the requirement entails and how it should be implemented in practice. This approach strikes a good overall balance between including sufficient detail in District regulations to make it clear to users of the regulations what is required, and incorporating by reference EPA's established, well-developed PSD provisions. To ensure that it is clear how this incorporation-by-reference will apply legally, the Proposed Amendments also include a provision in Section 2-2-103 explicitly providing that the incorporation of the PSD program elements incorporates and is subject to all applicable provisions, procedures, and related requirements for implementation that apply under the Code of Federal Regulations when EPA implements the program.

Proposed Section 2-2-103 also provides explicitly that this incorporation-by-reference approach will incorporate the requirements of the EPA program as they exist at the time of adoption by the Board of Directors. The incorporation by reference will not be "rolling" in the sense that any future changes by EPA to its PSD program will not automatically become part of the District's program. If EPA changes its PSD regulations in the future, the existing version of the regulations (the version in effect on the date of the Board's adoption) will continue to be the version that is incorporated by reference, until such time as the Board of Directors can revisit the issue and incorporate EPA's revised version. This is somewhat cumbersome from a regulatory efficiency perspective, as it will require continued vigilance by the Air District to ensure that the District's program is kept up to date with any future changes by EPA. But it is necessary in order to ensure that the District's Board of Directors retains ultimate control over the regulatory requirements that facilities in the Bay Area are subject to under the Air District's authority. For example, if EPA were to make some changes to the PSD program that are not appropriate for the Bay Area, it is important that the District's Board of Directors have a chance to review and consider them before they become legally effective.[57] A "rolling" incorporation-by-reference would remove this

[57] EPA's "NSR Reform" is a good example of how this situation could arise in practice. In that case, EPA adopted a change to its NSR rules that the California legislature disagreed with and declared was contrary to the policy of the State of California. A "rolling" incorporation-by-reference provision that automatically incorporated changes like NSR Reform would not be appropriate because it would remove the Board of Director's independent authority to determine what the District's regulations should require.

Board of Directors oversight, and would be legally impermissible for this reason. Moreover, the administrative burden in having to monitor and revisit the rule in the event of changes by EPA to its PSD regulations would be the same whether the District used an incorporation-by-reference approach or drafted entirely separate stand-alone regulations that did not refer to EPA's program. Even if the District were to create its own independent regulations in this way, it would still have to revisit and revise those regulations to keep current with any further EPA developments in the future.[58] This requirement is simply a reality that the District must contend with in light of the joint state/federal system of "cooperative federalism" through which the Clean Air Act is implemented. District Staff will continue to monitor EPA developments in this area, and will bring any changes back to the Board of Directors for review and concurrence as appropriate.

b) Applicability: "PSD Projects" as Defined in Section 2-2-224

The PSD requirements apply at all facilities with a potential to emit a PSD pollutant in an amount that exceeds the PSD applicability thresholds.[59] The applicability threshold is 100 tpy for facilities in any of the 28 specific categories listed in CAA Section 169(1) and 40 C.F.R. Section 51.166(b)(1)(i)(*a*) (which includes most types of major industrial facilities); and 250 tpy for facilities that are not in one of the listed categories. If a facility will have the potential to emit any PSD pollutant at these levels, then the facility is subject to PSD permitting.

PSD permitting applies to new sources and modifications to existing sources at PSD facilities that will result in a net increase in emissions above specified PSD "significance" levels. The significance thresholds vary depending on the pollutant, and are between 10 tpy and 100 tpy. (EPA's significance thresholds are set forth in 40 C.F.R. section 51.166(b)(23)(i); the proposed revisions incorporate the same thresholds, set forth in the definition of "significant" in proposed Section 2-2-227.) Before a permit can be issued for any construction at a facility over the 100/250 tpy PSD facility threshold (either for a new source or a modification of an existing source), the PSD requirements must be satisfied for each PSD pollutant for which the new construction will result in a net increase in emissions of a significant amount. Increases are based on the source's actual emissions baseline, as provided in proposed Section 2-2-603 and 2-2-604. (These actual emissions baseline and emissions increase calculation concepts are discussed below in Section IV.B.3.g.i.)

[58] The recent developments with $PM_{2.5}$ are a good example of this situation. There is no way that EPA's regulation of $PM_{2.5}$ could be made self-implementing through the District's NSR program. The only appropriate way to add $PM_{2.5}$ to the District's regulations – practically, politically, and legally – is through action by the Board of Directors.

[59] PSD pollutants are all pollutants that are subject to regulation by EPA under the Clean Air Act, except for non-attainment pollutants and hazardous air pollutants. Those types of pollutants are regulated under the non-attainment NSR provisions discussed above and under Section 112(b) of the Clean Air Act, respectively. With respect to hazardous air pollutants, the District also regulates a similar category of pollutants known as toxic air contaminants under its Regulation 2, Rule 5 (Toxic Air Contaminants). The term "PSD Pollutant" is defined in proposed Section 2-2-223.

Applying the PSD permitting requirements thus involves a two-party inquiry. The first inquiry is whether the facility will be over the 100/250 tpy PSD applicability threshold. If a facility will have the potential to emit more than the applicable threshold amount (after the permit is issued), then the PSD requirements are implicated. The second inquiry is then to determine whether the permit will authorize a "significant" net increase in emissions of any PSD Pollutant. Any time that such a facility wishes to construct a new source or make a modification to an existing source at the facility that will increase the facility's net emissions by more than a "significant" amount, the new source or modification will be subject to the PSD provisions in Regulation 2-2 for each pollutant for which there will be a significant net increase.[60] Increases that are less than these "significant" levels have been determined by EPA to be *de minimis* in relation to their potential to cause or contribute to a violation of the NAAQS, in accordance with *Alabama Power v. Costle*, 636 F.2d. 323 (D.C. Cir. 1979). (See discussion in Section IV.B.3.a. below for further detail on EPA's establishment of these *de minimis* "significant" increase thresholds.)

The PSD applicability test also incorporates EPA's concept of "netting", under which emissions increases from new projects are considered in connection with other recent increases and decreases associated with recent projects over the past 5 years. Projects within this 5-year netting period are referred to as "contemporaneous", and the District's 5-year "contemporaneous" period is set forth in the definition of that term in proposed Section 2-2-206. PSD permitting applies at major facilities where there will be a significant "net" increase in emissions of a PSD pollutant.

The Proposed Amendments implement these applicability concepts through proposed Section 2-2-224, which establishes a definition of "PSD Project".[61] This term is the key applicability provision because all of the substantive and procedural requirements for PSD permitting (as set forth in proposed Sections 2-2-304 through 2-2-307, 2-2-401 through 2-2-406, and elsewhere) apply to "PSD Projects" as defined in Section 2-2-224. The definition incorporates the three applicability requirements outlined above as follows:

[60] Note also that PSD requirements will apply to construction of a new or modified source at a facility with a PTE below the PSD "major" facility threshold if the new or modified source by itself would result in an increase over the "major" facility threshold. This requirement is set forth in the final sentence of the "PSD Project" definition in proposed Section 2-2-224. For example, take a facility in one of the listed categories with PSD "major" facility threshold of 100 tpy. If the facility has a PTE of 75 tons per year it would normally not be subject to PSD because its emissions are below this 100 tpy "major" facility threshold. If the facility were to propose a new or modified source that would result in an emissions increase of 100 tpy, however, that project would be subject to the PSD requirements because it would be over the 100 tpy threshold all by itself.

[61] Staff carefully considered the most appropriate term to use to designate what types of projects will be subject to PSD. EPA's PSD regulations use the terms "major facility" and "major modification" to delineate which projects trigger PSD. Staff did not want to use those terms for PSD applicability in Regulation 2, Rule 2, however, because it would risk causing confusion with the terms "major facility" and "major modification" in the non-attainment NSR context. (See current Regulations 2-1-204, 2-2-220 and 2-2-221.) Staff are therefore proposing the term "PSD Project" instead as the clearest way to indicate what projects are subject to PSD permitting requirements. The substantive elements of PSD applicability set forth in the definition of "PSD Project" incorporate the same substantive elements that EPA uses; the only difference is that the District will be using a different term in order to avoid confusion. The proposed revisions also add a note in connection with the definition of "major modification to a major facility" to clarify that those terms are being used for non-attainment NSR applicability and the term "PSD Project" is being used for PSD applicability.

- *First*, the facility at which a new source or modification will occur must have a PTE in excess of the 100/250 tpy PSD applicability threshold (depending whether it is one of the 28 listed categories) in order to trigger PSD permitting. This element of the applicability test is set forth in proposed subsection 224.1.
- *Second*, the new emissions from the new source or increase in emissions from the modification being proposed must exceed the specified significance thresholds in order to trigger PSD permitting. This element of the applicability test is set forth in proposed subsection 224.2. The subsection references the significance thresholds set forth in proposed Section 2-2-227, which mirror the federal significance thresholds adopted by EPA.
- *Third*, the net emissions increase associated with the new source or modification must exceed the significance thresholds, when other recent increases and decreases at the facility are taken into account. This element of the applicability test is set forth in proposed subsection 224.3. The proposed revisions also explicitly set forth how to undertake the "netting" analysis to make this determination, in proposed Section 2-2-220. Section 2-2-220 provides that the net increase in emissions for purposes of PSD applicability is determined by summing (i) the increase from the proposed new source or modification being permitted, plus (ii) any other creditable contemporaneous emissions increases, less (iii) any other creditable contemporaneous emissions decreases. Past emissions increases and decreases must have occurred within the past 5 years in order to be "contemporaneous" (per Section 2-2-206), and they must not have already been accounted for in a previous PSD netting analysis in order to be "creditable" (per Section 2-2-207).

Finally, it is also important to mention that the District's PSD program will be based on the difference between the facility's actual emissions in the past, before a modification is implemented, compared with its maximum permitted emissions in the future after the modification is implemented. It will not incorporate EPA's "NSR Reform" approach of basing PSD applicability on unenforceable future projections of what emissions may be instead of on enforceable permit limits. Staff's analysis of this issue and reasons for preferring to base PSD permitting on enforceable emissions limitations are addressed in detail in Section IV.B.3.g.ii. of this Staff Report.

c) PSD "Best Available Control Technology" Requirement – Section 2-2-304

The first substantive PSD permitting requirement is the federal PSD "Best Available Control Technology" (BACT) requirement. This requirement is set forth in EPA's implementing regulations in 40 C.F.R. Section 51.166(j) (which mandates that approved state PSD programs must require BACT) and 40 C.F.R. Section 52.21(j) (which requires BACT under the federal PSD program). The District's regulations must require PSD BACT to control emissions of any PSD pollutant for which there will be a significant net increase in emissions as a result of the PSD Project.

The Proposed Amendments implement this requirement in proposed Section 2-2-304, entitled "PSD BACT Requirement". Section 2-2-304 requires that a PSD Project must use BACT to control emissions of

any PSD Pollutant for which the net increase in emissions as a result of the project will exceed the significance threshold for that pollutant. For each such pollutant, the permit will require BACT for each new or modified source at which there will be a net emissions increase. This provision therefore creates a two-part inquiry for projects that involve multiple new or modified sources. First, the PSD Pollutants that will be subject to the BACT requirement are determined – these are all PSD pollutants for which there will be a significant net increase from the project as a whole. Second, the sources at which BACT must be applied for such sources is determined – these are any sources with a net increase in one of those pollutants. Each new or modified source that is part of the project must apply BACT for each such pollutant for which it will have a net increase in emissions. Put another way, a new or modified source will be subject to BACT for a PSD Pollutant if (i) the project as a whole will have a significant net increase in emissions of the pollutant, and (ii) source in question will have any net increase in emissions of the pollutant.

For sources that trigger BACT under these applicability procedures, proposed Section 2-2-304 incorporates by reference the requirements of the federal PSD program in specifying how BACT is to be implemented. It uses the Clean Air Act definition of BACT in CAA Section 169(3) to define the level of emissions control required as BACT, and incorporates by reference all of EPA's other requirements in the federal PSD program for implementing BACT.[62] Under this provision, the APCO will implement BACT for PSD Projects in the Bay Area in exactly the same manner as EPA implements BACT under the federal PSD project, and subject to exactly the same requirements that EPA is subject to under the federal PSD program. These procedures include the requirements specified in 40 C.F.R. Section 52.21(j), as well as applicable EPA guidance, policies, and interpretative precedents implementing Section 52.21(j). These procedures also include any applicable exemptions such as those set forth in 40 C.F.R. Section 52.21(i). Simply put, any technical or policy consideration that must be taken into account in implementing BACT in federal PSD permitting will also apply for implementing BACT in District permits for PSD Projects.

d) PSD Source Impact Analysis Requirement – Section 2-2-305

The second substantive PSD permitting requirement is the federal PSD "Source Impact Analysis" requirement. This requirement is set forth in EPA's implementing regulations in 40 C.F.R. Sections 51.166(k)-(n) (which mandate that approved state PSD programs must include a Source Impact Analysis requirement) and 40 C.F.R. Section 52.21(k)-(n) (which set forth the Source Impact Analysis requirements under the federal PSD program). The District's PSD provisions must incorporate this Source Impact Analysis requirement. In a nutshell, the requirement (i) prohibits PSD Projects that will cause or contribute to an exceedance of any NAAQS for any PSD pollutant or to any exceedance of a PSD "increment"; and (ii) establishes procedures for analyzing and determining whether emissions from a PSD Project will cause or contribute to any such exceedance.

[62] Note that PSD BACT applicable under proposed Section 2-2-304 is different from District BACT applicable under proposed Section 2-2-301. As explained in Section IV.B.1.b. above, District BACT under Section 2-2-301 (which is defined in proposed Section 2-2-202) is a more stringent level of control that is equivalent to the federal "Lowest Achievable Emissions Rate" (also sometimes referred to as "California BACT"). PSD BACT is the level of control that is required under the federal PSD program, and is defined in Section 169(3) of the Clean Air Act.

The Proposed Amendments implement this requirement in proposed Section 2-2-305, entitled "PSD Source Impact Analysis Requirement". Section 2-2-305 prohibits the APCO from issuing an authority to construct for any PSD Project unless the APCO determines, for each PSD Pollutant for which the project will result in a significant net increase in emissions, that such net increase in emissions will not cause or contribute to a violation of any PSD NAAQS or PSD increment. Proposed Section 2-2-305 also specifies the procedures for making such a determination, incorporating by reference the federal procedures established by EPA in 40 C.F.R. Section 52.21 for the federal PSD program. Specifically, subsection 2-2-305.1 requires that an applicant for an authority to construct for a PSD Project must prepare and submit an analysis of background air quality in the area of the project for each PSD pollutant for which the project will result in a significant net increase in emissions, using the procedures for such analyses required under the federal PSD program in 40 C.F.R. Section 52.21(m). Subsection 2-2-305.2 requires that the applicant must then demonstrate for each such pollutant that the project's net increase in emissions will not cause or contribute to a violation of an applicable ambient air quality standard (including both California[63] and National standards for which the Bay Area is not in non-attainment) or applicable increment, using the procedures for such demonstrations required under the federal PSD program in 40 C.F.R. Section 52.21(k). This incorporation by reference will incorporate the procedures for undertaking a preliminary analysis comparing the project's impacts with applicable Significant Impact Levels (SILs) and then a full analysis (if necessary) for impacts that exceed the SILs as established by EPA guidance. Subsection 2-2-305.3 specifies the modeling methodologies that must be used in such an analysis. Subsection 2-2-503.4 requires that the APCO must review the analysis and determine that any such net emissions increase will not cause or contribute to an exceedance of any applicable air quality standard or increment before issuing an authority to construct for the project. As with the procedures for conducting the PSD BACT analysis, this incorporation by reference will draw into District PSD permitting all of the applicable guidance, policies, and interpretative precedents that EPA has developed as part of its PSD program, as well as the exemptions set forth in 40 C.F.R. Section 52.21(i) to the extent that they may be applicable for exempting a PSD Project having to undergo a Source Impact Analysis.

e) PSD Additional Impacts Analysis Requirement – Section 2-2-306

PSD permitting also requires PSD Projects to undergo an "Additional Impacts Analysis" that evaluates any impairment to visibility, soils and vegetation that may occur as a result of the project, as well as an analysis of any general commercial, residential, or other growth associated with the project. This requirement is set forth in EPA's implementing regulations in 40 C.F.R. Sections 51.166(o) (which mandates that approved state PSD programs must include an Additional Impacts Analysis requirement) and 40 C.F.R. Section 52.21(o) (which sets forth the Additional Impact Analysis requirement under the federal PSD program).

[63] The requirement to demonstrate no exceedance of any California standard is being carried over from the District's current PSD requirements, in accordance with SB 288. See generally current Section 2-2-304 (requiring NAAQS exceedance analysis) and current Section 2-1-205 (defining NAAQS to include California standards); and current Section 2-2-414 (requiring analysis of "air quality standards" generally).

The proposed PSD regulations implement these requirements through proposed Section 2-2-306, entitled "PSD Additional Impacts Analysis Requirements". Subsection 306.1 requires an applicant for a PSD Project to prepare an analysis of potential impairment to visibility, soils and vegetation; subsection 306.2 requires the applicant to prepare an analysis of potential impacts from any associated growth; and subsection 306.3 provides for APCO review of the analyses. As with the other PSD elements, proposed Section 2-2-306 incorporates by reference the requirements for such analyses under EPA's PSD program as specified in 40 C.F.R. Section 52.21(o), as well as applicable EPA guidance, policies, and interpretative precedents; and it is subject to the exemptions set forth in 40 C.F.R. Section 52.21(i). The District will implement the Additional Impacts Analysis requirements under proposed Section 2-2-306 in exactly the same manner that EPA implements the requirement under its federal PSD permitting program.

f) PSD Class I Area Requirements – Section 2-2-307

The fourth substantive requirement of the PSD permitting program is the Class I Area impacts analysis requirement. This requirement is designed to protect air quality in designated Class I Areas, which are areas of special natural importance such as National Parks. The only such Class I Area within the District's jurisdiction is Point Reyes National Seashore in Marin County.[64]

The Class I Area Impacts requirement provides that the PSD permitting authority must work in conjunction with the Federal Land Manager for any Class I Area located within 100 km (62 miles) of a PSD project to ensure that the Federal Land Manager can review and evaluate the potential adverse impacts to air-quality related values in the Class I Area.[65] These requirements are set forth in EPA's implementing regulations in 40 C.F.R. Sections 51.166(p) (which establishes Class I Area Impact requirements that must be included in approved state PSD programs) and 40 C.F.R. Section 52.21(o) (which sets forth the Class I Area Impact requirements for the federal PSD program), among other provisions.

The proposed PSD provisions implement the Class I Area Impacts requirement through Section 2-2-307, as well as through the Federal Land Manager notice provision for PSD projects in Section 2-2-402. Proposed Section 2-2-402 requires the APCO to notify the Federal Land Manager (i) if the APCO receives advance notification of an application for a PSD Project that will be located within 100 km of a Class I Area; and (ii) within 30 days of receipt of any such application (and at least 60 days before holding any public hearing on such application), with that notice including a copy of the permit application and the application's analysis of potential Class I Area impacts.[66] This notice will provide the Federal Land

[64] Note also that certain projects located near the edge of the District's jurisdictional boundaries could also implicate other Class I Areas in adjacent air districts, such as Pinnacles National Monument. These will also be encompassed within the Class I Area impacts analysis requirements.

[65] The Federal Land Manger is the federal official with responsibility for the Class I Area. It is defined in proposed Section 2-2-212 as the Secretary of the federal department with authority over such lands, or a subordinate acting with the Secretary's authority.

[66] Proposed Section 2-2-401.4 requires the applicant to prepare and submit this analysis, which the APCO will forward on to the Federal Land Manager for review in accordance with Section 2-2-402.

Manager the opportunity to review any potential impacts to the Class I Area and inform the District of any concerns. Proposed Section 2-2-307 then states that if the Federal Land Manager concludes that the emissions from the project may have an adverse impact on air-quality-related values in the Class I Area and provides the APCO with a demonstration of such adverse impacts within 30 days of receiving notice of the application, the APCO shall promptly review and consider that demonstration. If the APCO concurs (or if the APCO comes to such a conclusion independently based on the APCO's own review), the APCO shall deny the application. If the APCO finds that the demonstration does not establish that the project would have such an adverse impact, the APCO shall provide notice of the basis for such finding in connection with any subsequent notice of public hearing. These requirements in Section 2-2-307 track the requirements of EPA's federal PSD permitting regulations in Title 40 of the Code of Federal Regulations.

Note also that proposed Section 2-2-307 will address Non-Attainment NSR Class I Area visibility concerns as well, in accordance with 40 C.F.R. Section 51.307. 40 C.F.R. Section 51.307(b) establishes a process for addressing potential visibility impacts in coordination with the Federal Land Manager that is similar to the process for PSD permitting, but extends it to address non-attainment pollutants as well. 40 C.F.R. Section 51.307(c) provides that this process for non-attainment pollutants shall be conducted in conjunction with the PSD Class I Area analysis. Accordingly, proposed Section 2-2-307 (and proposed Sections 2-2-401.4 and 402, which help implement Section 2-2-307) apply to new major facilities and major modifications to major facilities that are "major" for NOx, VOC, SO_2 and $PM_{2.5}$.

g) Procedural Requirements

EPA's PSD regulations also include certain procedural requirements to ensure that interested members of the public have notice of, and an opportunity to participate and provide input in, District PSD permitting activities. These requirements are set forth in 40 C.F.R. Section 51.166(q), and they are similar in many ways to the procedural/public participation requirements that apply to NSR permitting programs generally under 40 C.F.R. Section 51.161. The District's NSR program addresses public participation in permitting actions under current Section 2-2-405/proposed Section 2-2-404, which provide a comprehensive public notice and participation process. These public notice and comment procedures are discussed in more detail in Section IV.B.3.c. below, and fully satisfy all of the PSD procedural/notice-and-comment requirements of 40 C.F.R. Section 51.166(q).

3. Other Provisions of Regulation 2, Rule 2

In addition to these important requirements that apply specifically to "major" facilities under the NSR program, there are also a number of additional provisions in Regulation 2, Rule 2 that help implement the program. These other provisions are discussed below.

a) NAAQS Protection Requirement (Modeling of Air Quality Impacts for Non-PSD Sources) – Section 2-2-308

The Proposed Amendments add a new requirement that applicants must conduct a modeling analysis to demonstrate that their emissions will not cause or contribute to an exceedance of the NAAQS. This new requirement, in proposed Section 2-2-308, will help ensure that the NAAQS are protected in the Bay Area, which is the primary focus of the NSR program.

- **Reasons for Extending NAAQS Protection Requirement to Non-"Major" Facilities and Non-Attainment Pollutants**

Proposed Section 2-2-308 requires that all new and modified sources that will cause a significant net increase in emissions of any pollutant for which a NAAQS has been established must demonstrate that the emissions will not cause or contribute to an exceedance of the NAAQS for that pollutant. This requirement is essentially the same as the current air quality impact modeling requirement for PSD projects (*see* discussion regarding proposed Section 2-2-305 above), except that it will apply to all new and modified sources, not just to PSD projects. The current PSD requirement applies only at facilities that exceed the PSD "major" facility thresholds (100 or 250 tons per year, depending on the type of facility), and only for emissions for which the Bay Area has not been designated as "non-attainment". Proposed Section 2-2-308 will extend this requirement to apply to all projects with significant net increase in emissions (as defined in Section 2-2-227[67]), including projects at facilities below the "major" facility threshold, and including emissions of non-attainment pollutants. Whenever a project will result in a significant net increase in emissions of any pollutant for which a NAAQS has been established,[68] the applicant (i) will need to conduct a modeling analysis of the impacts of the project on pollutant concentrations in the ambient air, and (ii) will need to demonstrate based on this modeling analysis that the project will not cause or contribute to a violation of the NAAQS. The modeling analysis and NAAQS compliance demonstration will be undertaken using the same long-established procedures that are used for such analyses and demonstrations under the PSD program.

Proposed Section 2-2-308 extends the air quality impact analysis requirement to smaller facilities and to non-attainment pollutants for the same reasons that the air quality impact analysis is required for PSD

[67] A "significant" increase for these purposes is defined using the established NSR significance levels under the definition set forth in proposed Section 2-2-227. This significance threshold mirrors the threshold used for applicability of the current source impact analysis requirements for PSD permitting. EPA considers projects with emissions increases that are less than "significant" to be *de minimis* in terms of their potential to cause a violation of the NAAQS.

[68] Note that modeling will not be required for determining impacts on ozone concentrations. Modeling ozone impacts is not practicable for several reasons. Ozone is not emitted directly, but is formed through a complex chemical reaction between oxides of nitrogen and volatile organic compounds in the presence of heat and sunlight. As such, the dispersion models that are used for standard air quality modeling are not appropriate for ozone modeling, and effective modeling tools simply do not exist for most applications. In addition, the modeling 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 $PM_{2.5}$.

Projects – that is, to ensure that new and modified sources will not jeopardize compliance with the NAAQS. Significant increases that could interfere with attainment and maintenance of the NAAQS need to be identified and avoided, even if they occur at a facility that does not exceed a "major" facility emissions threshold. All exceedances of the NAAQS count towards the Bay Area's attainment status, regardless of the size of the facilities that cause them, and their impacts on the public health and welfare are the same. By the same token, significant increases in emissions of non-attainment pollutants are equally important as significant increases in emissions of PSD pollutants if they will interfere with attainment of maintenance of the NAAQS. Such increases need to be identified and avoided to ensure protection of human health and the environment. Extending the air quality impact analysis requirement to cover significant net increases in emissions at smaller, non-"major" facilities, and to encompass non-attainment pollutants as well as PSD Pollutants, will help accomplish these important air quality goals.

Requiring such a demonstration for all significant net emissions increases – i.e., net increases above the "significant" levels set forth in Proposed Section 2-2-227 – is a reasonable, targeted approach to addressing these concerns. Requiring this demonstration for projects with significant net emissions increases targets those projects with the greatest potential for jeopardizing the region's compliance with the NAAQS. Excluding smaller projects where the net increase is less than significant allows such projects to avoid overly burdensome permit review requirements in cases where the emissions involved are relatively small and, compared to the region's total emissions inventory, not very consequential. Where a project's net emissions increase is less than significant, it is considered to be *de minimis* and will not be subject to this requirement. Such small sources are numerous, but they collectively make up a relatively small contribution to the region's total emissions. Requiring a modeling analysis and demonstration for all such sources would not be warranted given the additional administrative burdens of doing so. Excluding small sources with emissions increases that are less than "significant" is also consistent with how EPA's NSR program treats other air quality analysis requirements (e.g., PSD air quality impacts).

Compliance with this requirement will be demonstrated using the same air quality impact analysis procedures and protocols that have been working well in the PSD context for many years. These are set forth in EPA's "Guideline on Air Quality Models" (codified in 40 C.F.R. Part 51, Appendix W) and related EPA guidance. Applicants will be required to model the ambient air quality impacts from any emission increases subject to the modeling requirement using EPA's computer model and determine if they exceed the "Significant Impact Level" (SIL). For any impacts above the SIL, applicants will be required to compare the impacts to background emission concentrations to see if the impacts will significantly contribute to an exceedance of a NAAQS. The modeling will be conducted using EPA's approved air quality models, databases, and related requirements specified in Appendix W. Regulated entities and consultants will be readily familiar with all of these requirements from their experience with PSD permitting, and they should be able to apply their experience to this new requirement with relative ease.

- **Compliance of the District's NSR Program With 40 C.F.R. Section 51.160**

This NAAQS compliance demonstration requirement in proposed Section 2-2-308 will also serve as an additional means to demonstrate for EPA's review that the Air District's NSR program will prevent any new or modified sources subject to NSR permitting from interfering with attainment or maintenance of any NAAQS. This is an EPA requirement for NSR programs under 40 C.F.R. Section 51.160, which provides (among other things) that each State Implementation Plan (SIP) must include enforceable procedures to prevent construction of any new source or modification that "will interfere with the attainment or maintenance of" any NAAQS.[69]

The Air District's NSR rules comply with this requirement – both currently and under the Proposed Amendments – by ensuring that new and modified sources are consistent with the Air District's comprehensive regulatory program adopted to ensure that the Bay Area will achieve its clean air goals, including attainment and maintenance of the NAAQS. This comprehensive regulatory program contains multiple requirements and provisions to control air pollution and provide for healthy air quality. As a result, the air quality in the Bay Area is either well within the established NAAQS, or on a path to attainment. Moreover, the District's comprehensive regulatory program has been approved by EPA as satisfying all applicable federal requirements under the Clean Air Act regarding timely attainment and maintenance of the NAAQS.[70] The District's regulatory program provides for a certain amount of emissions growth from new and modified stationary sources, and it still ensures that overall the Bay Area will attain and maintain the NAAQS because of the stringency of the District's regulations (along with those of other agencies). As long as new and modified sources that may be constructed in the future remain consistent with this comprehensive overall regulatory program, they will not interfere with attainment or maintenance of any NAAQS.

The District's NSR permit review process provides for a thorough regulatory review to ensure that all new and modified sources will be consistent with this regulatory program and therefore will not "interfere with attainment or maintenance" of the NAAQS. Specifically, Section 2-1-304 provides that the APCO will deny an Authority to Construct and/or Permit to Operate for any new or modified source that will not comply. The Air District's NSR regulation therefore contains procedures (i) to identify whether any source will interfere with attainment or maintenance of the NAAQS (i.e., a thorough permit review to determine whether it will be consistent with the District's comprehensive regulatory program that ensures NAAQS attainment and maintenance); and (ii) to prohibit construction of any source that will interfere with attainment or maintenance (i.e., by denying authority to construct any source that

[69] 40 C.F.R. Section 51.160(a)(2) requires that the SIP must contain procedures for determining whether any new or modified source will interfere with attainment or maintenance of any NAAQS, and 40 C.F.R. Section 51.160(b)(2) requires that the SIP contain procedures for preventing construction of a new or modified source if it will result in such interference.

[70] In the case of $PM_{2.5}$, the District is in the process of developing documentation to submit to EPA for review and approval demonstrating compliance with CAA requirements for $PM_{2.5}$. (As explained elsewhere, adding $PM_{2.5}$ provisions to the District's NSR program is one element of the District's CAA compliance efforts for $PM_{2.5}$.) District Staff expect that EPA will fully approve the District's submission when it has had an opportunity to complete its review.

will not comply with this program). These procedures satisfy the requirements of 40. C.F.R. Section 51.160.

This has long been the Air District's understanding of how its NSR program satisfies 40 C.F.R. Section 51.160. The District interprets EPA's position to be the same, as evidenced by EPA's approval of the District's existing SIP-approved NSR regulations without having raised any objection regarding 40 C.F.R. Section 51.160. However, EPA Region IX staff stated in a comment letter that they would like "additional information" on this issue.[71] Region IX staff identified several alternative approaches for satisfying Section 51.160, including (i) providing emissions projections that account for growth from new and modified sources without jeopardizing attainment or maintenance and (ii) requiring dispersion modeling for all new and modified sources that will result in a significant net increase in emissions.

The District's NSR program as set forth in the Proposed Amendments will utilize both of these approaches.[72] As noted above, the comprehensive system of air quality regulations that governs emissions in the Bay Area allows for emissions growth from new and modified stationary sources, while still providing for attainment and maintenance of the NAAQS. For ozone and $PM_{2.5}$, the two pollutants for which the 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. As noted above, the District satisfies all of EPA's requirements for attainment planning with respect to these pollutants. New and modified sources that are consistent with these planning efforts (as is required by Section 2-1-304) will not interfere with attainment or maintenance, even if they do involve emissions increases. For the other criteria pollutants, for which the Bay Area is designated as attainment, the District's regulations allow for emissions growth from new and modified sources, but current pollution levels are sufficiently below the NAAQS that such growth is not expected to cause a NAAQS exceedance. Even making conservative assumptions about the extent of such growth that could occur in the future, additional emissions from new and modified stationary sources cannot reasonably cause a NAAQS exceedance given the current magnitude of the Bay Area's total emissions and the amount that would be necessary to cause an NAAQS exceedance. District Staff have conducted a detailed analysis of this situation, for both attainment and non-attainment pollutants.[73] Based on this analysis, it is clear that the District's NSR program satisfies 40 C.F.R. Section 51.160 because it requires all new and modified sources to comply with the District's comprehensive regulatory program, which will provide for

[71] EPA Region IX Staff Comment Letter at p. 8, § 5.b. ("NAAQS Compliance"). The letter referenced 40 C.F.R. Section 51.160(f), not Sections 51.160(a) and (b). District Staff understand from discussions with EPA Region IX Staff that their concern involves how the District will address the requirements to ensure that new and modified sources will not interfere with attainment or maintenance, which are the requirements addressed in Sections 51.160(a) and (b).

[72] Region IX staff did not identify any legal requirements or agency guidance on how Section 51.160 should be interpreted on these issues, and District Staff are not aware of any. The District's NSR rule as contained in the Proposed Amendments comports with both of these alternatives suggested by EPA Region IX staff, however.

[73] See C. Lee, BAAQMD, Analysis of Compliance with 40 C.F.R. Section 51.160(a) & (b) (Aug. 2012).

attainment and maintenance of the NAAQS even with a certain amount of growth from new and modified sources.

In addition, the new NAAQS protection requirement in proposed Section 2-2-308 will implement the second alternative that EPA Region IX staff identified. As explained above, this provision will apply to all NSR permits, not just to PSD projects, and it will require a demonstration that the emissions associated with them will not cause or contribute to a violation of the NAAQS. Every NSR permit for any new or modified source will be subject to this requirement, with the only exception being for permits with *de minimis* net emissions increases. Section 2-2-308 establishes this *de minimis* exemption at the levels approved by EPA as being sufficiently small that the potential benefits from modeling their impacts on NAAQS compliance is not warranted given the administrative burdens that would be involved. EPA adopted these *de minimis* threshold levels – which are also referred to as the NSR "significance" levels – in accordance with the principles set forth in *Alabama Power v. Costle*, 636 F.2d 323 (D.C. Cir. 1979), which authorize exemptions from NSR permitting requirements for *de minimis* sources.[74] As EPA has determined, emissions increases below these levels do not have a significant potential to cause a NAAQS exceedance sufficient to warrant a NAAQS compliance modeling demonstration.[75] For the same reasons, they are appropriate levels at which to exempt new and modified sources from the NAAQS compliance modeling requirement in proposed Section 2-2-308. Using these *de minimis* levels is also consistent with the comment letter from EPA Region IX staff, which states that if an agency chooses to use emissions modeling to satisfy 40 C.F.R. Section 51.160, it should require modeling for "new and modified sources that will result in a <u>significant</u> net increase in emissions . . . ."[76]

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[74] Requirements for Preparation, Adoption, and Submittal of State Plans; Approval and Promulgation of Implementation Plans, Final Rule, 45 Fed. Reg. 52.676, Section XI ("*De Minimis* Exemptions") (Aug. 7, 1980). *Alabama Power v. Costle* involved the *de minimis* principle in the context of a federal administrative agency implementing a federal statute, but EPA has recognized that the same principle applies to State agencies in adopting their NSR programs. *See* Approval and Promulgation of Implementation Plans; revisions to the Nevada State Implementation Plan; Stationary Source Permits, Proposed Rule, 77 Fed. Reg. 38,557, 38,562 & fn. 6 (June 28, 2012).

[75] Note that the bulk of EPA's *de minimis* NSR "significance" thresholds were adopted in 1980 (*see* 45 Fed. Reg. 52,676), and the NAAQS have not been static since that time. But EPA has continued to reaffirm their appropriateness and to rely on them as exemption levels under the *Alabama Power* principle. This point is highlighted both by EPA's determination not to revisit the thresholds that were established in 1980, as well as the agency's recent statements continuing to treat them as *de minimis* for NSR purposes. When EPA adopted a *de minimis* "significance" threshold for $PM_{2.5}$ in 2008, for example, it explained that "EPA considers such lower emissions increases [i.e., below the "significance" thresholds] to be *de minimis* . . . ." Implementation of the New Source Review (NSR) Program for Particulate Matter Less Than 2.5 Micrometers (PM2.5), Final Rule, 73 Fed. Reg. 28,321, 28,332 (May 16, 2008). EPA also noted this fact in 2010 in addressing greenhouse gases under the NSR program, stating that "EPA has established significance levels for various pollutants, generally relying on a *de minimis* basis." Prevention of Significant Deterioration and Title V Greenhouse Gas Tailoring Rule, Final Rule, 75 Fed. Reg. 31, 514, 31,560 (June 3, 2010) (citing August 7, 1980, rulemaking adopting "significance" thresholds). Relying on EPA's "significance" levels as the thresholds for the NAAQS protection requirement in proposed Section 2-2-308 therefore continues to be consistent with EPA's approach to modeling emissions impacts for purposes of evaluating potential NAAQS exceedances.

[76] *See* EPA Region IX staff comment letter, at p. 8 (emphasis added).

In addition, District Staff have undertaken their own analysis of the extent to which using these *de minimis* thresholds for the NAAQS compliance demonstration requirement in Section 2-2-308 would exempt new emissions increases in the Bay Area specifically. This analysis further supports the use of EPA's *de minimis* exemption levels under *Alabama Power v. Costle*. District Staff conducted a review of all NSR permits issued over the past 20 years to identify the total amount of emissions that would be exempt under these *de minimis* thresholds. Staff then compared the amount of such exempt emissions to the Bay Area's total annual emissions. Staff conducted this comparison for each criteria pollutant to determine the percentage emissions increase that would be authorized each year under these *de minimis* exemption levels without being subject to the Section 2-2-308 NAAQS compliance analysis requirement. The amount of such exempt emissions varies depending on the pollutant involved and the year reviewed, but the bottom line is that the total emissions increases from all of the NSR permits issued each year that will be eligible for this *de minimis* exemption in Section 2-2-308 will amount to only 0.02% to 0.34% of the region's total emissions inventory.[77] Conducting a full modeling analysis to demonstrate NAAQS compliance for each of these *de minimis* permits would not be warranted, given the small overall addition the region's emissions inventory and the administrative burdens that would be involved. This analysis further supports exempting these permits from the Section 2-2-308 requirement under *Alabama Power v. Costle.*

For all of these reasons, the District's NSR program fully satisfies all requirements of 40 C.F.R. Section 51.160(a) and (b) to ensure that new and modified sources permitted under the program will not "interfere with attainment or maintenance" of the NAAQS.

b) Compliance Review For Issuance of Permit to Operate – Section 2-2-310

Before issuing an Authority to Construct for a new or modified source, District staff conduct a thorough review of all applicable regulatory air quality requirements to ensure that the new or modified source will comply with them. This is the District's primary method of ensuring compliance through its NSR permitting program. In addition, after the Authority to Construct is issued and the applicant constructs the source under the Authority to Construct, District Staff then conduct an additional compliance check prior to issuing a Permit to Operate for the source. This final check focuses specifically on whether the source has conducted and passed any required source testing for the equipment on startup, and whether it has taken any required steps to shut down existing equipment to generate emission reduction credits.[78] Upon completion of this review and a determination that the source is in compliance, the APCO issues the Permit to Operate. This provision is in current Section 2-2-312, and the

[77] See C. Lee, BAAQMD, Analysis of Compliance with 40 C.F.R. Section 51.160(a) & (b) (Aug. 2012).

[78] Note also that there is a general prohibition on all permits issued under Regulation 2 that the APCO may not issue a permit to any source that is not operating in compliance with all applicable regulatory requirements. See Section 2-1-304. This requirement would prohibit the APCO from issuing a Permit to Operate unless the source is operating in compliance with all conditions in the Authority to Construct and all other applicable regulatory requirements. The purpose of the final compliance check in Section 2-2-310 is to confirm explicitly that the source has conducted and passed any required source testing and that any sources that need to be shut down to create emission reduction credits have in fact been shut down.

proposed amendments retain the same requirement essentially verbatim (with only a few minor wording revisions to clarify its application and renumbering to Section 2-2-310). The proposed amendments do not make any substantive changes to this requirement.

c) Public Notice and Public Participation Provisions – Sections 2-2-401 through 2-2-408

The Proposed Amendments expand the public notice and comment requirements for NSR permits. Currently, Regulation 2, Rule 2 requires the APCO to publish a notice and provide the public with an opportunity to comment on any proposed Authority to Construct for a new major facility or a major modification to an existing major facility. These are facilities with emissions over the 100 tpy "major" facility threshold, and modifications at such facilities that will increase emissions by a significant amount. Before issuing an Authority to Construct for a new major facility or a major modification at an existing major facility, the APCO must publish a notice of the proposed decision to issue the permit and provide the public with at least 30 days to review and comment on the decision. The APCO must also provide an opportunity for a public hearing, if warranted. The APCO must then review and consider any comments received on the proposal to issue the Authority to Construct before making any final decision on whether to issue it.

The Proposed Amendments will expand this requirement by lowering the threshold at which public notice and comment applies. The Proposed Amendments will require public notice and an opportunity to comment on any Authority to Construct for a new or modified source that will result in a significant increase in emissions, regardless of the size of the facility. That is, whereas the current requirement applies to new and modified sources with significant increases at facilities over the 100 tpy "major" facility threshold, the Proposed Amendments will require notice of all such new and modified sources at all facilities, regardless of whether they are over the 100 tpy "major" facility threshold or not.

Extending the public notice and comment provisions to cover sources with significant emissions increases, even where they are not located at "major" facilities, is important because the impact of such emissions increases is the same regardless of the size of the facility at which they occur. To the extent that members of the public may be interested in being notified of permitting activity regarding such increases, and may want to review and comment on such permitting actions, it is important to provide such an opportunity. Expanding the public notice-and-comment requirements will ensure that interested members of the public will be guaranteed this opportunity for any permitting action that will involve a significant increase in a facility's emissions.

Providing such notice-and-comment opportunity will also ensure that the District's NSR program is consistent with EPA's requirements in 40 C.F.R. Section 51.161. That provision sets forth the notice-and-comment provisions that must be included for SIP approval, and it is not limited to providing for notice and comment only for "major" facilities. It applies to the NSR program in general, including permits for non-"major" facilities and modifications. The Proposed Amendments will ensure that the District's program complies with this requirement by requiring notice and an opportunity to comment on all NSR permits, except for those that will involve only a *de minimis* increase in emissions. As discussed above in

Section IV.B.3.a. regarding the NAAQS protection requirement, EPA has established that increases below the "significant" levels it has established for NSR permitting are *de minimis* in terms of the impact that they will have on whether the region will comply with the NAAQS. Excluding permits involving such *de minimis* emissions increases from the notice-and-comment requirements is therefore consistent with the principles established in *Alabama Power v. Costle.* Furthermore, District Staff have conducted an analysis of the contribution that such sources make to the region's overall emissions of criteria pollutants and found that permits that will be exempted under this provision will account for only 0.02% to 0.34% of the region's total emissions per year. Exempting such permits from the notice-and-comment requirements is appropriate because the additional burdens and delay from subjecting such *de minimis* increases to the full notice and comment process are not outweighed by any additional benefit given the relatively small amount of emissions that these permits involve.

The Proposed Amendments also add a requirement that the public notice required under these provisions must be posted prominently on the District's website. Currently, the notice is required to be published only in a newspaper of general circulation. Although the District has normally made a practice of posting such notices on its website, the Proposed Amendments will codify this requirement and make it mandatory. The existing requirement for newspaper publication applicable for Authorities to Construct involving major facilities and major modifications will remain in place; the new requirement for all notices to be posted on the District's website will be in addition to this existing requirement and will augment it. This treatment of website publication for NSR permits is consistent with recent EPA guidance regarding providing public notice for NSR permits under 40 C.F.R. Part 51,[79] and it recognizes that in the current day and age the internet is an effective and convenient method for disseminating important information to the public. District Staff have considered the benefits of using the Internet to provide notice of NSR permits and have concluded that it is a medium that is routinely and readily accessible to the public.

d) Other Administrative Requirements – Sections 2-2-409 through 2-2-414

The remainder of the Administrative Requirements in Sections 2-2-409 through 2-2-414 contain several additional provisions applicable to NSR permit applications, processing, and issuance. These requirements are mostly being carried over from the current Regulation 2, Rule 2 without any substantive changes. These provisions include the following requirements:

Proposed Section 2-2-409 provides that if an existing regulatory requirement (including a permit condition) is relaxed such that a source's potential to emit is increased above an NSR permitting threshold under Regulation 2, Rule 2, then the owner/operator of the source must apply for and obtain an NSR permit for the source as if it were a new or modified source under the rule. Thus, if a source has a regulatory limit such as a permit condition that keeps its potential to emit a District BACT pollutant

[79] *See* Memorandum from J. McCabe to EPA Regional Administrators, "Minor New Source Review Program Public Notice Requirements Under 40 CFR 51.161(b)(3) (April 17, 2012), available at: www.epa.gov/region07/air/nsr/nsrmemos/pubnot.pdf.

below 10 pounds per day, and that limit is relaxed in some way such that the source's potential to emit is now over 10 pounds per day, then the source needs to apply for and obtain an NSR permit that applies BACT for that pollutant under Section 2-2-301 in the same manner as for a new or modified source. The same would apply for a facility that has a limit on emissions that keeps its potential to emit below 100 tons per year and thus has not been subject to "major" non-attainment NSR or PSD requirements: if the regulatory limit is relaxed such that the facility's now exceeds the 100 ton-per-year "major" facility threshold, it would need to apply for an obtain a permit applying all applicable requirements for a "major" facility as if it were a new or modified source. This requirement is in current Section 2-2-412 and is being carried over verbatim in the proposed amendments in Section 2-2-409. Only the Section number is being changed; District Staff are not proposing any changes in the language of this provision.

Proposed Section 2-2-410 states explicitly that the APCO may impose any and all conditions in an Authority to Construct and/or Permit to Operate that are necessary to ensure compliance with applicable NSR requirements, including requirements on how the applicant operates the source or abatement equipment or other sources used to generate emission reduction credits. This is a fundamental legal principle inherent in any permitting system, but this provision states it explicitly to avoid any potential for uncertainty on this point by any party. The provision also states explicitly that provisions can be specified with a future effective date and made conditional on certain events such as source test results, monitoring data, and public complaints. This provision is in current Section 2-2-419, and the proposed amendments carry it over into proposed Section 2-2-410 without any substantive changes. Proposed Section 2-2-410 is substantively the same as current Section 2-2-419, with certain revisions to the regulatory language to improve its clarity, and renumbering as a result of the reorganization of Regulation 2, Rule 2.

Proposed Section 2-2-411 sets forth procedures for an applicant to obtain a refund of unused offsets (i.e., banked emission reduction credits) where (i) the applicant has provided more offsets in connection with a permit application than are legally required or (ii) the applicant provided offsets in order to obtain a permit, but never built or operated the source and so has never actually "used" the offsets. In the latter case, the applicant must either demonstrate that the permit has expired or surrender the permit if it has not expired. In these situations, the APCO will refund the amount of any such unused offsets, without charging banking fees, upon request by the applicant.

This provision is in existing Section 2-2-422. The Proposed Amendments will carry it over in proposed Section 2-2-411 with only minor changes. The one substantive change concerns the current language contemplating that a source can obtain a refund of offsets if it is permitted to operate up to a certain level, but it is operated with actual emissions at a lower level. The existing language contemplates that the source could take a lower emission limit to reflect the lower actual emissions, and obtain a refund for the full amount of the difference between the permitted emissions level and the actual emissions level. Credit should certainly be given in such a situation, but the appropriate mechanism for doing so is for the source to use the reduced level of operation to generate emission reduction credits under the calculation methodology in proposed Section 2-2-605. That is the mechanism that the District's NSR program uses to credit situations where a source is permitted at a certain level of emissions but opts to

take a lower emissions limit because it is not emitting up to its full potential. To put all sources in this situation on an equal footing, Staff have drafted proposed Section 2-2-411 to require that any credit for such reductions must be given through the emission reduction credit process, not through the offset refund process.

Proposed Section 2-2-412 provides that the APCO will make an annual demonstration of the effectiveness of the District's offset requirements for ozone precursors. This provision is in current Section 2-2-423. The Proposed Amendments will not make any changes to it, but will recodify it in Section 2-2-412. This provision was added in 2000 in response to an EPA comment regarding whether the District's offset requirements for ozone precursors were sufficiently stringent to satisfy federal requirements. The District has always believed that its offset requirements are considerably more stringent than required under the federal CAA for a number of reasons, and this provision was added to address EPA's concerns.

Proposed Section 2-2-413 provides that the APCO will publish a triennial report on how the District is implementing the no-net-increase requirements of Section 40919 of the California Health & Safety Code. This provision is in current Section 2-2-316, and is being retained verbatim in the Proposed Amendments. This is not a substantive requirement for implementation of NSR, but is more in the nature of an administrative requirement for the District to document its compliance with Section 40919, and so it is being moved to the "400s" section of the Rule, which sets forth the Rule's administrative requirements.

Proposed Section 2-2-414 provides that the APCO will publish a workbook setting forth recent BACT determinations, which permit applicants, District staff, and others can use as guidance in how BACT should be applied in certain situations. Provisions for publishing this workbook are in the definition of "BACT" in current Section 2-2-206. The provisions are being moved to the administrative requirements in the "400s" section of the NSR Rule, because they are not really part of the definition of BACT but instead are an administrative procedure the District uses to help with implementation of the BACT requirement in practice. No substantive changes are being made to this provision. Note that the important language regarding use of the BACT Workbook as guidance and the requirement that BACT must be determined on a case-by-case basis for each source where it is applied is being retained. Interested persons are encouraged to use the BACT Workbook as a guidance document, but should keep these limitations in mind when considering what BACT requires for any specific permitted source.

e) Post-Construction Monitoring – Section 2-2-501

Proposed Section 2-2-501 provides that the APCO can require monitoring of a source's emissions as a permit condition where necessary to determine the source's impact on air quality. This provision for requiring post-construction monitoring is set forth in current Section 2-2-502. The proposed revision

clarifies the regulatory language and provides that monitoring can be required for any NSR permit when necessary, not just for PSD Projects.[80]

f) Monitoring and Modeling Procedures – Sections 2-2-601 & 2-2-602

Proposed Sections 2-2-601 and 2-2-602 establish procedures that govern ambient air quality monitoring and modeling analyses, respectively. Proposed Section 2-2-601 provides that all air quality monitoring conducted for NSR permitting must be conducted in accordance with the District's Manual of Procedures and EPA's guidelines in 40 C.F.R. Part 58, Appendix B. Proposed Section 2-2-602 provides that when modeling a source's emissions impacts, the source may not use an artificially high exhaust stack to increase dispersion and reduce its impacts. In conducting modeling, no credit may be given for an exhaust stack height that is higher than what is required consistent with good engineering practices. These provisions are set forth in existing Sections 2-2-601 and 2-2-602. The Proposed Amendments do not make any substantive changes; they simply clarify some of the regulatory language and update the regulatory citations to EPA's requirements in these areas.

g) Emissions Calculation Procedures – Sections 2-2-603 through 2-2-611

The Proposed Amendments expand upon the current regulation in order to provide additional clarity on how emissions are calculated in implementing Regulation 2, Rule 2. The details of how a facility's or a source's emissions are calculated – and in particular, how emissions increases and decreases are calculated – are crucial to how the substantive NSR permitting requirements apply in specific situations. The District has found that the current regulatory language addressing these calculations is ambiguous and unclear in some places, which has led to difficulties in understanding what exactly is required by the regulations, differences in interpretation of how the permitting provisions should be applied, and in some cases inconsistent application of the requirements. To address this situation, the Proposed Amendments include additional specific regulatory language to explain in detail how these concepts are to be applied in practice. As explained below, these more detailed calculation provisions do not change the District's current procedures, but instead codify them in clear language that will set forth explicitly how each of the substantive NSR permitting requirements should be applied in individual NSR permits. These amendments will help District Staff, regulated facilities, and interested third parties in achieving a consistent understanding of how the NSR Rule is to be implemented.

i. Calculating Emissions Increases and Decreases: The NSR "Actual-to-Potential" Applicability Test for Emissions Increases

Many important NSR requirements apply based on the amount of the emissions increase or decrease that results from a new or modified source. Calculating the emissions increase (or decrease) that will

[80] Note that current Section 2-2-501 provides for pre-construction monitoring of air quality in the area of a proposed PSD Project. The requirements for pre-construction air quality monitoring are now addressed in proposed Section 2-2-305, which incorporates by reference the federal procedures for conducting PSD ambient air quality analyses, including the procedures for when pre-construction monitoring is required.

occur when a new source is built or when a change at an existing source is implemented is therefore central to implementing this program.

New sources present a relatively simple case. The amount of emissions increase from a new source that has never been in existence before is simply the maximum amount of emissions that the source could potentially emit once it is built and begins operating. This level of emissions is referred to as the "Potential to Emit", or "PTE", and is defined in Section 2-1-217. Even where a source will rarely (if ever) actually operate at its full maximum potential, it is important to base permitting decisions on this full maximum emissions rate in order to be conservative and ensure that the worst-case scenario is adequately addressed by the permit.

Calculating the amount of an emissions increase or decrease when a change is made to an existing source is somewhat more complicated. In applying the NSR permitting requirements, the amount of the emissions increase or decrease that results from a change to an existing source has always been measured by comparing (i) the source's actual emissions before the change is made with (ii) the source's new maximum potential emissions (PTE) after the change.[81] The calculation has always based the prior emissions scenario (called the "baseline") on the source's actual emissions in the past – rather than its maximum permitted emissions – to ensure that the baseline scenario reflects actual environmental conditions and not hypothetical permitted emissions that have not actually been emitted. Similarly, the calculation has always based the future emissions scenario on maximum potential emissions to account for the fact that the source may well emit up to that full amount after the change is implemented.

As an example to illustrate this concept, consider a source that is permitted to emit up to 100 tons per year, but that has only operated at half capacity and has thus emitted only 50 tons per year. If the facility wants to make a change that will increase its maximum potential to emit to 150 tons per year, the NSR program would treat this change as resulting in an increase of 100 tons per year: an increase from the 50 tons-per-year actual emissions baseline before the change to the 150 tons-per-year maximum potential emissions after the change. Any other calculation methodology – for example, treating the change as only a 50 ton-per-year increase because the source's maximum capacity is increasing by only 50 tons per year – would underestimate the magnitude of the real change in emissions to the environment that could occur after the change is implemented: i.e., a 100-ton increase from 50 tons per year to 150 tons per year of actual emissions.[82]

[81] Note that changes at a source that affect emissions are sometimes referred to generally as "modifications". The term "modification" has a specific regulatory definition, however, meaning a change at a source that increases emissions in a manner that triggers NSR permitting review. (See Section 2-1-234.) But the emissions increase/decrease measurement concepts apply more broadly than this. For example, changes at a source that reduce emissions are not "modifications" as defined in Section 2-1-234, because (by definition) they do not result in an emissions increase. For this reason, this discussion and the associated regulatory provisions use the more general term "change" at an existing source instead of the term "modification".

[82] Note that the same concept applies for emissions reductions as well. Take the facility with maximum permitted emissions of 100 tons per year but that actually emits only 50 tons per year. If that facility is shut down, the emissions that are actually taken out of the air are only the 50 tons per year that the facility actually emitted.

This methodology for determining emissions increases and decreases is often referred to as the "actual-to-potential" test, and it is the methodology that is contained in the District's current NSR provisions. The Proposed Amendments will retain these same concepts, but explain them more clearly and with an increased level of detail. Specifically, current Sections 2-2-604 and 2-2-605 establish that emissions increases are based on an actual emissions "baseline", and then are measured based on the future Potential to Emit that will result after the new or modified source. But they are somewhat difficult to follow, in that they set forth a detailed procedure for calculating the amount of an emission reduction, and then for emissions increases simply cross-reference that methodology. The proposed amendments will present the methodology in a more straightforward manner by first setting forth the "baseline" calculation procedure (i.e., how to calculate the emission before the change is made), and then specifying how this "baseline" will be compared to the future potential to emit (i.e., how to measure the increase or decrease in emissions from this baseline after the change is made).

- **Current Provisions**

Currently, the District's NSR rule applies this methodology in the following provisions.

Section 2-2-605 sets forth the "actual-to-potential" emission calculation procedure for Emission Reduction Credits that a source can claim from implementing a change in operations that will reduce its emissions. This is where the core actual-emissions "baseline" concept is codified. Section 2-2-605 provides that Emissions Reduction Credits are calculated based on a source's historical "baseline" emissions, which is the source's average actual emissions over the past three years (or shorter period if the source is less than 3 years old).

The source's baseline emissions are then adjusted to reflect current regulatory standards, so that the source cannot claim credit for reductions that would be required by law. If a regulation would require a source to reduce its emissions anyway, then the source should not be able to claim credit for doing so voluntarily. This adjustment is sometimes referred to as the "surplus" adjustment, because it aims to ensure that credited voluntary reductions are "surplus" of what is required by law.[83] The "surplus" adjustment is made by calculating the source's baseline emissions rate and then applying current regulatory standards to see what emissions rate they would require at the source. The baseline emission rate is calculated by dividing the average throughput during the baseline period (the baseline throughput) by the average emissions during the baseline period (the baseline emission rate) in order to obtain an average emission rate per unit of production during the baseline period. A review is then conducted of the most stringent regulatory standards applicable to the operation, and if any of those standards would require a lower emission rate per unit of production, the baseline emission rate is

Calculating the amount of the reductions based on its maximum permitted capacity (100 tons per year) would over-estimate the actual environmental benefit from shutting down the facility.

[83] This adjustment has historically been commonly referred to as a "RACT adjustment", after the acronym for "Reasonably Available Control Technology," because RACT standards are one of the types of regulatory standards that are applied when this adjustment is made. "Surplus adjustment" is a more accurate short-hand reference, because the adjustment is made for all applicable regulatory requirements, not just RACT. This Staff Report will use "surplus adjustment" as a short-hand reference for this concept.

adjusted accordingly to reflect what would be required under current regulations.[84] This adjusted baseline emission rate is then multiplied back up by the baseline throughput to give an annual emission rate adjusted to reflect current regulatory standards. The amount of Emission Reduction Credits the source can claim is the difference between this adjusted baseline emissions rate before the change in operations and the source's potential to emit after the change.[85]

Section 2-2-604 then establishes the same "actual-to-potential" test for measuring emissions increases. It provides that the same baseline calculation procedure is used for calculating emissions increases from operational changes at a source. The emissions baseline is the actual historical average emissions rate over the past three years, adjusted downward to reflect the most stringent current regulatory standards. The amount of emissions increase is the difference between this baseline emissions rate and the source's potential to emit after the operational change is implemented. This "actual-to-potential" emissions increase test is used in determining whether the BACT requirements in Section 2-2-301 apply to a source.

- **Proposed Amendments**

The Proposed Amendments retain these calculation procedures, but they expand upon and clarify the existing regulations to explain in more detail how they are to be applied in specific situations. In particular, instead of having the baseline calculation procedure embedded in the methodology for determining emission reduction credits, the Proposed Amendments set forth the baseline calculation procedure in its own section and then specify how to perform the "actual-to-potential" emission increase/decrease calculation compared to that baseline.

Section 2-2-603 sets forth the procedures for determining historical baseline emissions and the "surplus" adjustment to reflect current regulatory standards. As under the current rule, proposed Section 2-2-603 establishes a three-year baseline period – with the exception of GHGs, for which a slightly different baseline period is being provided, as discussed in more detail Section IV.B.3.g.ii. below. Section 2-2-603 sets forth the procedures for exactly how this baseline period is to be established, how baseline emissions during this period are determined, and how such baseline emissions are adjusted to ensure that only "surplus" emissions are credited.

The **first step** in establishing an emissions baseline is determining the baseline period. This is done by determining when the baseline period ends under Section 2-2-603.1, and then determining the period preceding that baseline period ending date over which the baseline emissions will be calculated under

[84] Specifically, current Section 2-2-605.5 states that the baseline emission rate shall be adjusted to comply with "the most stringent of RACT, BARCT, and District rules and regulations in effect or contained in the most recently adopted Clean Air Plan."

[85] The current regulation makes an exception for sources that are "fully offset", meaning that the facility owner/operator has provided offsets for the full amount of the source's permitted emissions rate. (See current Section 2-2-245.) For sources that are "fully offset" in this way, the baseline for calculating emission reduction credits is the permitted emission rate, not the actual historical average emissions rate. The permitted emission rate is still adjusted to reflect current regulatory standards, even for fully offset sources.

Section 2-2-603.2 – i.e., the baseline period. The baseline period ending date is established under Section 2-2-603.1 as follows:

- For an emissions increase from a new or modified source, the baseline period is the period immediately preceding the application date[86] for the new or modified source, as provided in subsection 603.1.1.[87]
- For an emissions reduction that can be credited from a change at a source that results in lower emissions, the baseline period is the period immediately preceding the date upon which the reduction became enforceable. Enforceability is the key concept in crediting such emissions reductions, because voluntary emission reductions cannot be credited for NSR purposes unless they are enforceable (among other requirements). The baseline period is therefore the period immediately preceding the date on which an emission reduction becomes enforceable and thus satisfies the requirements for being an "Emission Reduction Credit" under proposed Sections 2-2-211 and 2-2-605.[88] This can occur in a number of ways. For example, the source can be physically dismantled and removed from service such that it would take a new permit application (and a new NSR review) in order to reinstall it or otherwise place the source back in service. Alternatively, if the source is not physically removed, permit conditions can be implemented to provide a legally binding commitment that it will not operate (or alternatively, the source's permit can be relinquished). For a source that does not require a permit, some other legally binding commitment is needed. In each of these cases, there is a legally enforceable guarantee that the source will no longer be causing the emissions that it did previously, which is the touchstone for generating an Emission Reduction Credit. The baseline period is the period immediately preceding the date on which the enforceable reduction occurred. This provision is set forth in subsection 603.1.3.
- For emissions banking applications under Regulation 2, Rule 4, the baseline period is the period immediately preceding the date of the banking application. The District uses this period for banking applications because it is important to ensure that facilities that want to bank emission

[86] Note also that time periods that are based on the submission of an application are in fact specified in the rule as based on the date that the application is determined to be complete. For simplicity, this discussion refers to application dates; such references should be understood to mean complete applications.

[87] The rule also includes a provision for calculating increases resulting from projects that did not go through the permitting process as a new source or modification. This provision is in subsection 603.1.2, and it is intended to address situations that arise in the context of a "netting" analysis where a change was implemented at a source in the past that resulted in an increase in emissions over baseline, but the change was not a "modification" that triggered NSR permitting. Such emissions increases must still be accounted for in netting (where appropriate), and so a provision needs to be made for establishing the baseline where there was no permit application. Subsection 603.1.2 provides that in such a situation, the baseline period is the period immediately preceding the date when the change that resulted in the increased emissions was first implemented.

[88] There are other important concepts regarding Emission Reduction Credits, such as the "surplus" requirement. Obviously, a source cannot take credit for an emission reduction as an ERC unless and until the reduction satisfies all such requirements. But in this context, for determining how the baseline period is applied, the key concept is when the reduction becomes enforceable.

reductions bring the reductions to the District's attention as soon as possible. When credits are banked, they can be used for many years into the future and at different facilities, and so it is important that the District review the details of the shutdown that generates a banked ERC as soon as the shutdown occurs, and not several months or years later. In order to encourage facilities to submit banking applications immediately upon shutdown of a source, and to limit the potential for the District to have to review a source's operations too far back into history, the District calculates the baseline period starting at the date of submission of the banking application. This is the District's current procedure for handling banking applications under Regulation 2, Rule 4, and it will be codified in subsection 603.1.4.

The baseline period is the time period leading up to this "baseline period ending date" during which the baseline emissions will be evaluated. As noted above, for all pollutants except for GHGs, the District uses a three-year baseline period. The baseline period will be the three years immediately before the baseline period ending date discussed above (*i.e.*, the three years immediately before the application date, the three years immediately before an emission reduction became enforceable, etc.). For GHGs, the baseline period is a 24-month period to be selected by the applicant according to certain requirements described in the rule. These provisions are set forth in subsection 603.2. Subsection 603.2.1 establishes the 3-year baseline period for all pollutants except GHGs; and subsection 603.2.2 sets forth the special rules that apply for GHGs.

It is also worth noting that because the baseline period for determining the amount of a contemporaneous emission reduction credit extends back over the three years before the credit is generated, the time period that needs to be reviewed may extend back before the five-year "contemporaneous" period from which such credits can be used. That is, if an emission reduction credit results from a change that a facility made four years ago that reduced emissions, that change is "contemporaneous" because it occurred within the past five years and it can be used to reduce the facility's cumulative increase associated with a new permit application today. But the baseline period for determining the amount of the emission reduction credit is the three-year period before the change took place – that is, the period between four years ago and seven years ago. Thus, in evaluating the amount of this contemporaneous emission reduction credit, emissions data will need to be reviewed from beyond the five-year contemporaneous period. This is appropriate (and indeed, required) under the rules for establishing the emissions baseline – as long as the actual change itself that generated the emissions reductions occurred (and became enforceable) within the five-year contemporaneous period.

Once the baseline period is determined, the **second step** is to determine the source's baseline emissions. Baseline emissions are established as a "baseline emissions rate" per unit of throughput. This calculation is provided for in subsections 603.3 through 603.5. The baseline emissions rate is obtained by dividing (i) the source's average emissions during the baseline period by (ii) its average throughput during the baseline period. The source's throughput is the operational parameter that correlates most closely with the source's emissions, which will necessarily be different for different types of operations. The baseline throughput is the actual average throughput during the baseline period (unless the throughput exceeded an applicable permit limit, in which case the baseline

throughput is the permitted throughput).[89] Baseline emissions are the actual average annual emissions during the baseline period (excluding any emissions that exceed any applicable limit).[90] Dividing the baseline throughput by the baseline emissions gives emissions per unit of throughput during the baseline period, which is the baseline emissions rate.

The **third step** is then to adjust the baseline emissions rate to reflect current regulatory standards – the "surplus adjustment". This is done by adjusting the baseline emissions rate downward, if necessary, to reflect what the emissions would be per unit of throughput if the operation were to comply with the most stringent regulatory standard currently in effect or contained in the District's most recently adopted Clean Air Plan.[91] The adjusted baseline emission rate is then multiplied back up by the baseline throughput to get adjusted baseline emissions for the baseline period. These calculations are provided for in subsections 603.6 and 603.7. This adjusted baseline emissions are then used in determining emissions increase and decreases as specified in Sections 2-2-604 *et seq*.

Section 2-2-604 then sets forth the "actual-to-potential" test for emissions increases and decreases from changes made at a source. The emissions increase or decrease from a physical change, change in throughput or production, or other similar change at a source is measured as the difference between (i) the source's PTE after the change and (ii) the source's adjusted baseline emissions before the change calculated according to the baseline emissions calculations set forth in Section 2-2-603. This procedure is identical to the current "actual-to-potential" test set forth in current Section 2-2-604. It applies in determining whether a new source or modification is subject to the BACT requirement in Section 2-2-301, as well as determining applicability of the PSD requirements in proposed Sections 2-2-304 through 307 (among other requirements).

[89] Note that an applicant can claim credit only for throughput that is adequately documented and verifiable. If the applicant does not have sufficient records to substantiate its claims of historical throughput, its throughput will be presumed to be zero during any portions of the baseline period where sufficient records are unavailable (or will be presumed to be only as much as the applicant can substantiate through adequate documentation). Only throughput that can be adequately documented will be credited in calculating baseline throughput.

[90] Again, if adequate documentation is not available for any portion of the baseline period, no emissions will be credited during that portion of the baseline. Only emissions that can be adequately documented will be credited in calculating baseline emissions. For purposes of calculating an emissions increase, emissions will be presumed to be zero during such periods (or will be presumed to be only as much as the applicant can substantiate through adequate documentation). For purposes of calculating emissions reductions from baseline, emissions will be presumed to be at the maximum permitted level (either absolute maximum or maximum per unit of throughput, whichever is more conservative) for periods where adequate documentation is not available.

[91] There is an exception to the general rule for surplus adjustments for purposes of determining whether PSD requirements apply. For that purpose, adjustments do not need to be made beyond what is required under the federal program as set forth in 40 C.F.R. Section 51.166(b)(47)(i)(b) and (b)(47)(ii)(b) & (c) (for example, for reductions required in the District's most recent Clean Air Plan that exceed a RACT level of control).

ii. Considerations Regarding Use of EPA's "NSR Reform" Emissions Increase Calculation Methodologies

An important consideration that District Staff addressed during development of the Proposed Amendments concerns a relaxation to the "actual-to-potential" methodology that EPA made in 2002 for purposes of applying NSR to "major" facilities. This regulatory change was called "NSR Reform" by EPA, and it changed the way that EPA applies its NSR program. NSR Reform includes three principal elements:[92]

1. Allowing a more flexible "baseline period" to be used in determining whether an emission increase from a modification at a source will require NSR permitting. The "major" facility requirements of the NSR program require a permit for any modification that will result in a "significant" increase in emissions above what the source emitted historically during the "baseline" period. With a restrictive "baseline period", the source may be forced to base its emissions increase calculation on a time period during which emissions may have been lower than what would be expected during typical operations. NSR Reform allowed the baseline period to reach back as far as 10 years to find a representative emissions baseline.

2. Allowing a source to calculate its emissions increase based on its projection of what future emissions will be, rather than on an enforceable permit limit. Historically, a source's emissions have always been based on its maximum permitted emissions for determining whether a modification to the source would cause a "significant" increase and require NSR permitting. If a source made a modification and did not anticipate that it would cause a significant increase, the source had to make an enforceable commitment – in the form of an enforceable permit limit – that the modification would not cause a significant increase. NSR Reform allowed sources to avoid NSR permit requirements based solely on an unenforceable projection that a modification would not cause a significant increase in emissions, without any enforceable permit limit to ensure that a significant increase would not in fact occur.

3. Allowing the use of "Plant-wide Applicability Limits" (PALs) for purposes of determining whether PSD permitting is required. PALs are facility-wide emissions caps that allow facilities to increase emissions at some sources without getting an NSR permit, as long as they decrease emissions at other sources such that overall facility-wide emissions do not increase by an amount that would require an NSR permit. NSR Reform added provisions to the federal NSR program allowing the use of PALs as an alternative means of complying with NSR.

EPA's relaxation of its "major" NSR requirements opened the door for the states to relax their own regulatory programs implementing the federal NSR program. The California legislature disagreed that doing so would be an appropriate choice for California, however, and so it enacted a law that prohibits California's air districts from doing so. The law – called "the Protect California Air Act of 2003", or SB

[92] These are the NSR Reform provisions that survived legal challenges. Two other elements were invalidated by the D.C. Circuit Court of Appeals. See *New York v. United States EPA*, 413 F.3d 3 (D.C. Cir. 2005). EPA's full suite of NSR Reform provisions can be found at 67 Fed. Reg. 80,186 (Dec. 31, 2002).

288,[93] prohibits any air district from relaxing any NSR requirements that were in place as of the end of 2002, when NSR Reform was adopted. SB 288 effectively prohibits the District from adopting NSR Reform, as doing so would relax the District's NSR regulations compared to the District's existing regulations that were on the books in 2002. (Note that although the District does not have a PSD program that was approved by EPA, it did have PSD provisions in its NSR Rule as of 2002, and adoption of NSR Reform would relax these requirements in violation of SB 288.)

The one exception to the SB 288 prohibition concerns greenhouse gases. The District has never regulated greenhouse gases before, and so no matter what applicability provisions it adopts – NSR Reform, pre-NSR Reform, or otherwise – they cannot by definition be a relaxation of existing requirements with respect to GHGs.[94] ARB has issued a legal opinion confirming this understanding of the law.[95] Staff therefore considered whether it would make sense as a policy matter to adopt any of the NSR Reform applicability methodologies for GHGs – and specifically whether to incorporate them into the PSD provisions that are being included in the Proposed Amendments, as these are the provisions that apply to GHG emissions. Staff have considered each of the elements of EPA's NSR Reform package on its individual merits.

- **Baseline Period**

With respect to the baseline period, the District's regulations for criteria pollutants currently require the most recent three-year period to be used as discussed above in Section IV.B.3.g.i. Emissions increases are measured as increases over the source's average emissions over the most recent three years. It is clear that with this baseline period there is a potential to end up with baseline emissions that may not actually be representative of normal operations. If the most recent three years reflect recession conditions when demand is depressed – as is the case currently – then the baseline emissions against which an emissions increase is measured will not actually be representative of normal source operations. To the contrary, in such a scenario much of the measured "increase" will not in fact be new emissions occurring after the modification, but will simply reflect a return to "normal" emissions levels

[93] *See* California Health & Safety Code §§ 42500 *et seq.*

[94] Some commenters suggested that the same situation applies for $PM_{2.5}$. Unlike GHGs, however, $PM_{2.5}$ is not a completely new pollutant compared to what was regulated in 2002 because $PM_{2.5}$ is a subset of PM_{10}, which was a regulated pollutant in 2002. Furthermore, the principal rationale used by ARB in its legal memorandum concluding that SB 288 does not apply to GHGs was that SB 288 focuses on pollutants for which a NAAQS has been established – which applies for GHGs because GHGs do not have a NAAQS, but which is not true for $PM_{2.5}$. Whether SB 288 applies for $PM_{2.5}$ as a legal matter is therefore unclear. But District Staff do not believe that adopting the NSR Reform applicability methodologies would be appropriate anyway, even if it is authorized under SB 288. PSD requirements already apply for PM_{10}, and $PM_{2.5}$ emissions will closely correlate with PM_{10} emissions for most sources. Thus providing the NSR reform flexibility for $PM_{2.5}$ would not create any meaningful difference for most sources, because they would be subject to PSD permitting for PM_{10} even if they could avoid it for $PM_{2.5}$ because of NSR Reform. For all of these reasons, Staff are not proposing to adopt any of the NSR Reform methodologies for $PM_{2.5}$.

[95] See Air Resources Board Guidance Document, "Tailoring Rule Implementation and SB288" (Dec. 22, 2010), attached to Letter from R. Fletcher, Deputy Executive Officer, ARB, to California Air Pollution Control Officers (Dec. 22, 2010).

when demand recovers. The use of the source's baseline actual emissions as the basis for determining whether there will be a "significant" increase was never intended to capture such emissions. It was intended to capture real increases in emissions that would occur after the modification is implemented at the source, not simply a return to normal conditions that would occur anyway regardless of whether or not the modification is made. The Proposed Amendments therefore use the more flexible baseline period for GHGs. For GHGs only, sources will be able to select any 24-month period within the past 10 years to use as the baseline period. (There is a slightly different rule for electrical utility steam generating units, which mirror's EPA's provisions for these types of facilities.) This baseline period will allow the PSD permitting program to more accurately target emissions increases related to modifications being made at a facility, rather than changes in emissions due simply to fluctuations in the business cycle. The more flexible baseline period for GHGs is set forth in subsection 603.2.2 of the baseline emission calculation provision in Section 2-2-603. (Note also that the District is providing this more flexible baseline period for GHGs only, because SB 288 bars any relaxation of the current 3-year baseline period for other pollutants. For all other pollutants, the 3-year baseline will continue to apply per subsection 603.2.1.)

- **Enforceability of Less-Than-Significant Emission Increases**

With respect to measuring emission increases based merely on projections of future emissions rather than on enforceable emissions limitations, the Proposed Amendments do not adopt this element of NSR Reform. Relying on projections instead of actual enforceable permit limits raises significant enforcement concerns. Although a facility may project at the time of permitting that a modification will not cause a significant increase in emissions, if those projections turn out to be wrong once the project is implemented and starts operating, there may end up being a significant increase without any PSD requirements being implemented. Moreover, the NSR Reform approach to using projected emissions looks only at the first five years after the modification is implemented. This would allow significant increases to escape PSD permitting review as long as they occur over a time frame of more than 5 years. Many projects have a lifetime of more than 5 years, and so longer-term emissions increases are clearly a concern for PSD permitting. For all of these reasons, the Proposed Amendments do not use the projected-actual-emissions increase test for GHG permitting. If a facility intends to make a modification that will not result in a significant increase in emissions, the District would not require PSD review for such a project, but the facility would need to commit to keeping its emissions to less than a significant increase through an enforceable emissions limit. It would not be appropriate to base important PSD permitting requirements solely on the facility's unenforceable projection of what emissions may be.

In deciding to require PSD permitting for GHGs to be based on enforceable emission limits, District Staff were mindful of the comments from some industry representatives that requiring PSD permitting for energy-efficiency projects and similar beneficial enhancements can be counter-productive because it can discourage worthwhile projects from being implemented. Staff disagree that requiring enforceable assurances that such beneficial projects will not cause significant increases will unduly dissuade such projects, however. If a facility is planning a beneficial project that will reduce emissions, Staff agree that such a project should be encouraged and that the PSD requirements applicable to significant emissions

increases should not apply. But if the project will in fact reduce emissions, the facility can undertake it without having to undergo PSD permitting simply by agreeing not to increase emissions by more than a significant amount through an enforceable permit limit. If the facility truly wants to implement a beneficial emissions-reduction project, it can do so as long as it makes an enforceable commitment that there will be no significant increase. If the facility is not comfortable making such an enforceable commitment, either because it is not really sure that there will be no significant increase or because it simply wants to retain the flexibility to increase emissions if the need arises, then it will have to obtain a PSD permit. But requiring a PSD permit in this latter scenario is entirely appropriate as a policy matter, because that scenario envisions the possibility of a significant emissions increase – which is exactly the outcome that the PSD program is designed to address. Simply put, if it is sufficiently clear that a project really will be beneficial and will not result in a significant emissions increase, that project can go forward without PSD permitting simply by taking an enforceable permit limit. If there is a potential that the project will result in a significant increase then the project will be subject to PSD permitting, as is appropriate for significant emissions increases.

Staff have also been mindful of the argument made by some industry representatives that requiring facilities to agree to enforceable permit limits would effectively eliminate some of the excess capacity that they currently have. This argument envisions a scenario where a source has never utilized its full capacity and so it has the ability in the future to greatly increase its emissions.[96] If the source wants to implement a beneficial improvement project to reduce emissions, but has to agree to an enforceable permit limit at some level below its full capacity in order to avoid PSD permitting requirements, then it will effectively be giving up some of the capacity that it currently has for future expansion, according to this argument.

These concerns are obviously highly important as the District considers how to implement PSD permitting for GHGs, and staff considered them carefully in developing the Proposed Amendments. But for a number of reasons, these concerns do not outweigh the problems discussed above that are inherent in basing PSD permitting on unenforceable projections of future emissions instead of enforceable permit limits. For one, the PSD permitting requirements would never prohibit the use of a facility's unused excess capacity under any circumstances. They would simply require that the facility implement the applicable PSD requirements as part of their permit in order to do so. Moreover, the primary substantive requirement, to use the Best Available Control Technology (BACT) to control emissions, is not unduly burdensome. PSD BACT – by definition – is limited to technologies that are

[96] Specifically, this situation would apply where the source has not utilized its full capacity during the baseline period from which emissions increases are measured. PSD permitting requirements apply if there is a "significant" emissions increase over emissions during the baseline period, which for GHGs is effectively 75,000 tons per year CO_2e. The concern is therefore that if a source's maximum capacity is more than 75,000 tpy CO_2e over its emissions during the baseline period, then the source will need to take a permit limit at less than maximum capacity in order to avoid PSD permitting. The Proposed Amendments allow for the baseline period for GHGs to be established during the highest 24-month period during the past 10 years, which should give sufficient flexibility to establish baseline emissions at a level that reflects the maximum operations that the source has historically experienced. Thus, the concerns about limiting a source's capacity are for all intents and purposes arguments about capacity that the source has never utilized.

cost-effective for the individual facility being permitted, and so by definition PSD permitting will not require facility to spend large sums of money that are not justified by large GHG emission reduction benefits. And EPA has indicated that such benefits will be achieved primarily by installing energy-efficient equipment, which most facilities are likely to do anyway as part of the project design. It is unlikely that any facility would not want to implement the most energy-efficient equipment that it can justify on cost-effectiveness grounds, given the cost savings involved from reduced fuel or power usage. Being required to do so under a PSD permit condition would therefore be unlikely to make a determinative difference in dissuading facilities from installing efficiency upgrades and similar beneficial projects, which is the concern on which these arguments are based.

In addition, a second reason why these concerns are misplaced is that simply because a facility has excess capacity that it has never utilized does not mean that it should be entitled to that capacity forever without having to implement cost-effective emission-reduction technologies. A facility that happens to have extra capacity to emit hundreds of thousands of tons of GHGs above what it has historically emitted should not be penalized because of that fact, but it should not necessarily get a free pass to emit that full amount where there are available, cost-effective methods that it can implement to get meaningful GHG reductions at a reasonable cost. That is all that the facility would need to do substantively in order to retain its full capacity, in situations where it did not want to take a permit limit to avoid PSD review (or if it took a permit limit to avoid PSD review, but then decided that it wanted to use the full capacity later on). And as noted above, it is unlikely that any facility would object to using the most energy-efficient equipment that is justified on cost-effectiveness grounds anyway, given the fuel and/or power savings that would result.[97]

For all of these reasons, it would not be appropriate to base PSD permitting on unenforceable projections of what emissions may be in the future. The PSD requirements for GHGs in the Proposed Amendments are therefore based on whether or not the source being permitted will have the potential to cause a significant increase in GHG emissions, based on its maximum permitted emissions – the same test that applies for all other pollutants. If a beneficial efficiency upgrade or similar modification will in fact reduce GHG emissions (or at least, not result in a significant increase), then the source can commit to ensuring that there will be no such significant increase through an enforceable permit limit and no PSD permitting requirements will apply. Conversely, if the project will have the potential to significantly increase GHG emissions, then it will be required to go through PSD review and implement cost-effective BACT measures to address its GHG emissions. And such projects should be subject to PSD review, because PSD has always been designed to apply to projects with the potential for significant emissions increases.

[97] Note also that cost-effectiveness for the PSD BACT requirement is evaluated on a source-by-source basis. Thus, the cost-effectiveness of implementing a certain type of equipment for a retrofit of an existing facility would be evaluated differently from the cost-effectiveness of using such equipment in the design of a completely new facility. It is likely that the design goals of any modification to an existing facility subject to PSD review will mesh fairly closely with requirements to use energy-efficient equipment for PSD BACT purposes.

- **PALs**

The third element of the NSR Reform methodologies concerns Plant-wide Applicability Limits (PALs). As District Staff were developing the Proposed Amendments, PALs were subject to a number of restrictions with respect to GHGs that limited how effectively they can be used in that context. EPA was working concurrently on a rulemaking to address some of these concerns, but that rulemaking was only just completed in the final weeks before District Staff published the Proposed Amendments (it became effective August 13, 2012), meaning that District Staff did not have any definitive indication of what EPA would allow for PALs as the Proposed Amendments were being developed.[98] Moreover, the rules for establishing PALs and using them in permitting decisions are highly complex. Developing provisions for PALs for GHGs as part of the District's PSD program will take considerable time and effort, if Staff were to conclude that doing so would enhance the PSD program. Finally, PALs provide for an alternative method of establishing compliance with PSD permitting requirements, and so they are not necessary in order to adopt a fully functioning PSD program. Although there are arguments that adding the option of using PALs may improve a PSD program, they are not necessary to make it work. For all of these reasons, District Staff concluded that it would not be appropriate to include provisions for PALs for GHGs as part of the Proposed Amendments. Instead, District Staff intend to review EPA's recent rulemaking on the subject and consider whether it would be appropriate to add PALs in a subsequent update. If further consideration of the subject suggests that adding PALs to the District's PSD program for GHGs would be beneficial, Staff will work with all interested stakeholders to develop such provisions.

- **Conclusions**

For all of these reasons, the Proposed Amendments do not adopt EPA's "NSR Reform" methodology for the District's NSR program in Regulation 2, Rule 2, with the exception of allowing the use of the more flexible baseline period for applying the PSD requirements to GHG permitting. This approach to NSR permitting satisfies SB 288, and it reflects the sound policy considerations discussed above.

Finally, it is also important to discuss a related consideration that District Staff addressed regarding NSR Reform, involving consistency with EPA's NSR approval requirements in 40 C.F.R. Sections 51.165 ("major" facility requirements for Non-Attainment pollutants) and 51.166 ("major" facility requirements for PSD pollutants). In adopting NSR Reform, EPA justified its relaxation of the NSR applicability requirements by claiming that NSR permitting was onerous and was discouraging facilities from implementing beneficial upgrade projects for fear of becoming a "major modification" subject to NSR permitting requirements. EPA argued that relaxing the applicability of NSR would allow such beneficial improvement projects to go forward without triggering NSR permitting, which would result in an overall environmental benefit. At the time EPA adopted NSR Reform and took this position, the agency suggested that if local permitting agencies did not adopt NSR Reform as well, then EPA would have to disapprove of their SIP programs for being less stringent than the federal program requirements. District Staff have therefore evaluated whether EPA will be able to approve the District's NSR program,

[98] *See* Prevention of Significant Deterioration and Title V Greenhouse Gas Tailoring Rule Step 3 and GHG Plantwide Applicability Limitations, Final Rule, 77 Fed. Reg. 41,051 (July 12, 2012).

which does not use the NSR Reform methodologies (with the exception of the more flexible baseline for GHGs).

After considering this issue, District Staff have concluded that its NSR program continues to be approvable, even without incorporating the NSR Reform methodologies. EPA did not ever take any action in the wake of NSR Reform to disapprove the District's program, and has allowed all of California's air districts – including this District – to continue implementing their NSR programs using the pre-NSR methodologies as required by SB 288.[99] This track record implies that EPA is comfortable with California implementing NSR using the pre-NSR Reform methodologies. Moreover, EPA recently addressed this issue specifically in its review of the "major" NSR program of the Sacramento Metropolitan Air Quality Management District, and the agency concluded that it is appropriate and consistent with the Clean Air Act to allow California to continue to implement NSR using the pre-NSR reform methodologies as they are required to do under SB 288. The Sacramento district's NSR program is set forth in Rule 214 (for Non-Attainment pollutants) and Rule 203 (for attainment pollutants), and neither of these rules uses the NSR Reform methodologies. EPA evaluated them in light of this issue and concluded that it was not necessary for them to incorporate NSR Reform in order to be approvable under the Clean Air Act. EPA reasoned that California has a robust regulatory system over and above the NSR program, and as a result there would be little benefit for regulated facilities from relaxing the NSR applicability provisions as EPA has done for the federal program. As EPA stated, "[in] light of these facts, EPA is proposing to find that it is acceptable for SMAQMD to not incorporate the NSR Reform provisions into their SIP approved NSR programs . . . ."[100] EPA finalized its proposal to do so effective August 19, 2011.[101]

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[99] EPA Region IX did revoke its delegation of its federal PSD permitting to the BAAQMD (and other districts) in the wake of the standoff between EPA and California over NSR Reform and SB 288. But it is not clear whether there was ever any substantive purpose or effect from this revocation vis-à-vis the NSR Reform debate, because such delegated federal PSD permitting by definition follows the federal rules and thus automatically incorporated NSR reform upon adoption by EPA, regardless of what any California air district had to say about it. (*See* 40 C.F.R. § 52.21, setting forth the requirements that apply to PSD permitting under delegation agreements.) What is clear is that EPA never told the California air districts that their <u>own</u> NSR programs adopted under State law – the ones affected by SB 288 – were no longer satisfactory or had to be amended to incorporate NSR Reform. Even where EPA has objected to air district's NSR program on other grounds – through issuance of what is known as a "SIP call" – EPA has never objected to a California air district's NSR regulations because they failed to incorporate NSR Reform. (*See* Action to Ensure Authority to Issue Permits under the Prevention of Significant Deterioration Program to Sources of Greenhouse Gas Emissions: Finding of Substantial Inadequacy and SIP Call, Final Rule, 75 Fed. Reg. 77,698 (Dec. 13, 2010).)

[100] Technical Support Document for EPA's Notice of Proposed Rulemaking for the California State Implementation Plan for the Sacramento Metropolitan Air Quality Management District, Rule 214 - Federal New Source Review, Rule 203 - Prevention of Significant Deterioration (May 5, 2011), at p. 17.

[101] *See* Revisions to the California State Implementation Plan, Sacramento Metropolitan Air Quality Management District, Final Rule, 76 Fed. Reg. 43,183 (July 20, 2011). The final approval was a full approval of the PSD provisions in Rule 203, and a partial approval and partial disapproval of the Non-Attainment NSR provisions in Rule 214; none of the reasons for the partial disapproval concerned NSR Reform.

Given these precedents, District Staff have concluded that the District's NSR program is approvable under the Clean Air Act without the relaxations in the applicability provisions that EPA adopted in its NSR Reform initiative. For the same reasons that EPA approved the Sacramento district's major Non-Attainment NSR and PSD provisions in that district's Rules 214 and 203, the District's major Non-Attainment NSR and PSD provisions in Regulation 2, Rule 2, are also approvable.

In a meeting with District Staff, EPA Region IX staff members raised an additional question regarding this issue specifically with respect to GHGs. EPA Region IX staff members opined that the passages referred to above in connection with Sacramento's rule primarily addressed criteria air pollutants, and they suggested that the District should develop its own, independent analysis for its treatment of GHGs (i.e., why the District's proposed PSD applicability provisions with respect to GHGs are approvable in light of NSR Reform). In light of this discussion, District Staff reviewed the cited discussion. Although it is true that the discussion was aimed primarily at criteria pollutants, the context of the analysis involved non-criteria PSD pollutants as well (i.e., regulated air pollutants for which no National Ambient Air Quality Standards have been developed) – including GHGs. Moreover, as a matter of law, EPA's approval of Sacramento's regulations specifically included approval of the provisions addressing GHGs. Indeed, one of the primary reasons that Sacramento submitted its revised NSR regulations was in response to EPA's "SIP Call" explicitly mandating that Sacramento update its regulations to address GHGs.[102] EPA responded to the this submission by approving it as consistent with the Clean Air Act. Under these circumstances, EPA could not have intended its approval to exclude Sacramento's provisions on GHGs. District Staff have therefore concluded that the same reasons why EPA found Sacramento's PSD provisions to be approvable make the District's PSD provisions approvable as well.

iii. Calculating the Amount of an Emission Reduction Credit

The Proposed Amendments also include a provision, in Section 2-2-605, specifying how to determine the amount of an Emission Reduction Credit. It is important to specify exactly how emission reductions will be calculated for this purpose, as an Emissions Reduction Credit serves an important regulatory function in implementing the Rule's offset provisions under Sections 2-2-302 and 2-2-303. The current rule does so in Section 2-2-605.6 (with Sections 2-2-605.1 through 2-2-605.5 specifying how the actual emissions baseline is calculated using with the principles outlined above). The Proposed Amendments separate out the baseline calculations into their own separate section, and then specify the Emission Reduction Credit calculation procedures in proposed Section 2-2-605.

Emission reduction credits are emission reductions that occur when a facility makes a change at a source that results in reduced emissions from that source (for example, by shutting down the source and removing it from service). When the facility then applies for a permit for a new source or modification in the future that will increase emissions, it can count those earlier emission reductions to reduce the cumulative increase associated with the new source or modification, as long as the change that caused the emission reduction was "contemporaneous" (i.e., occurred within the past five years). Alternatively, the facility can apply to "bank" those emission reductions for use in offsetting emissions increase in the

[102] *See* Action to Ensure Authority to Issue Permits etc., Final Rule, 75 Fed. Reg. 77,698 (Dec. 13, 2010).

future, either by offsetting increases at its own facility or by selling the banked credits to another facility to offset emissions increases there. To qualify as an emission reduction credit for these purposes, a reduction must satisfy all of the requirements set forth in Section 2-2-211, which requires that it must be enforceable through permit conditions or some other legally enforceable mechanism; and must be real, permanent, quantifiable and in excess of what is required by applicable regulations. These requirements are all specified in proposed Section 2-2-605, along with the procedures for calculating the amount of emission reduction credits generated.

For calculating the amount of such reductions that is creditable, the procedure depends on whether the source is "fully offset" – that is, whether offsets have been provided for the entire amount of the source's permitted emissions limit.[103] If the source is fully offset, then the amount of emission reduction credits is based on the source's permitted limit before the change that caused the reductions (adjusted to reflect current regulatory standards). The amount of emission reduction credits generated is the difference between (i) the (adjusted) permit limit before the change that caused the emission reduction, and (ii) the new permit limit after the change is implemented (or zero, in the case of a source that is shut down). If the source is not fully offset, then the amount of emission reduction credits is based on the source's adjusted baseline emission rate before the change that caused the reduction as calculated under Section 2-2-603. The amount of emission reduction credits generated is the difference between (i) the adjusted baseline emissions rate and (ii) the new permit limit after the change is implemented (or zero, in the case of a source that is shut down). If the change that resulted in the emission reductions occurred within the past five years and satisfies all of the other requirements for generating emission reduction credits, then the cumulative increase associated with a new permit application at the facility can be reduced by the amount of the emission reduction credit from the change; or alternatively, the emission reduction credit can be banked under Regulation 2, Rule 4 for future use or sale to another facility.

iv. Calculating A Facility's Emissions Offsets Obligations

The Proposed Amendments also provide detailed calculation procedures to set forth exactly how a facility's emissions offset obligations will be determined for purposes of the offsets requirements in Sections 2-2-302 and 2-2-303. These procedures are in proposed Sections 2-2-606 through 2-2-609. For a facility with emissions over the offset requirement applicability thresholds, these provisions will specify how the facility's offset obligations will be calculated.

As discussed above in connection with Sections 2-2-302 and 2-2-303, the offsets provisions are an essential element of NSR permitting for non-attainment pollutants. Where a region is non-attainment of the NAAQS for a pollutant, the Clean Air Act requires the region to adopt a two-fold strategy to come back into attainment: first, the region needs to cap emissions from major sources so that they will not

[103] The definition of "fully offset" is in current Section 2-2-245 and in proposed section 2-2-213. The Proposed Amendments do not make any substantive change to this definition (although they do make explicit the District's practice of not treating a source as "fully offset" if the permit limit has been offset by unreimbursed small facility banking account credits).

continue to increase and make the non-attainment situation worse; and second, the region needs to adopt emission reduction measures to reduce emissions from current levels to bring pollution levels back within the NAAQS. The offsets requirements implement the first part of this strategy – capping emissions from existing major sources. It is set forth in CAA Section 173(a)(1), which requires that before a proposed major new or modified source of a non-attainment pollutant can begin operation, "sufficient offsetting emissions reductions [must] have been obtained, such that total allowable emissions from existing sources in the region, from [new and modified minor sources], and from the proposed source will be sufficiently less than total emissions from existing sources . . . so as to represent . . . reasonable further progress" towards attainment of the NAAQS.[104] The offset requirements in Sections 2-2-302 and 2-2-303 implement this requirement by capping emissions of non-attainment pollutants from major facilities at no more than what was being emitted at the time that the District started implementing its offset program – what is referred to as the "baseline date". These offset requirements keep such emissions from increasing and making the non-attainment situation worse, giving the District's other regulatory efforts a chance to work and bring the region's emissions down in order to attain compliance with the NAAQS.[105]

The District's offset provisions implement this mandate by requiring that facilities subject to the offset provisions must provide offsetting emissions reductions for any new emissions increases after the applicable baseline date.[106] These increases – all emissions increases from new sources or modifications since the baseline date – are referred to collectively as the facility's "cumulative increase". A facility's cumulative increase, and hence the amount of offsets that need to be provided, is calculated by reviewing all permits that have been issued for the facility back to the applicable baseline date and summing the individual cumulative increases associated with each one. For each permit that was issued, the increase is the amount of extra potential emissions (i.e., the increase in PTE) that was allowed under the permit, minus any contemporaneous on-site emissions reduction credits. The sum of

[104] CAA Section 173(a)(1)(A) provides that offsets must be required for federal non-attainment pollutants sufficient to ensure that the Bay Area as a whole continues to make "reasonable further progress" towards attainment of the NAAQS. California law further provides that offsets for California non-attainment pollutants must be required sufficient to ensure a "no net increase" in emissions, which is overall a more stringent standard. The District's offset requirements are implemented based on the "no net increase" principle.

[105] This is a somewhat simplified summary for purposes of this discussion. In fact, emissions from major facilities are not just capped, they are actually decreasing under the District's offsets requirements. There are several reasons for this, including the fact that in some cases the District requires offsets to counter new emissions increases at greater than a 1:1 ratio and the fact that some facilities are shut down or reduce their emissions without any new increases to take their place, among other reasons (not to mention the significant reductions that are occurring because of the District's many other regulatory requirements unrelated to the offsets provisions). For purposes of this discussion, the important point is that the offset requirements are intended to ensure that there are no overall increases in non-attainment pollutants from major facilities that would hinder efforts to get back into attainment.

[106] The cumulative increase baseline date is April 5, 1991, for all pollutants except $PM_{2.5}$. For $PM_{2.5}$, the baseline date will be the effective date of the proposed amendments that implement the new $PM_{2.5}$ offsets requirement. See proposed Section 2-2-209.

all such increases associated with all prior permits issued for the facility back to the baseline date is the facility's total cumulative increase. This is the amount of emissions that needs to be offset.

The offsets requirements are based on increases in the facility's maximum potential emissions above what it was actually emitting as of the baseline date. The requirements conservatively assume that the facility will emit up to its full potential, and so offsets must be provided for the full amount of the facility's PTE above the level at which it was emitting as of the cumulative increase "baseline date" to ensure that there is no net increase above that level. Accordingly, the first time a facility seeks to increase its emissions after the "baseline date", it must provide offsets for the difference between its actual emissions baseline and its full PTE. This initial calculation is essentially the same "actual-to-potential" test described above. Beyond this initial application of the offset requirement, any subsequent modifications to the facility require additional offsets to the extent that they further increase facility's potential to emit. This is because the facility is required to offset its full maximum potential emissions above its historical baseline levels, and so any additional increase in potential emissions will need corresponding reductions to ensure that the facility's maximum emissions will be offset. If the facility makes a modification that does not increase its potential to emit, it does not need to provide any additional offsets to ensure that there will be no net increase over its historical baseline emissions. In that case, sufficient offsets have already been provided for the facility's emissions up to the full extent of its maximum potential (above its historical baseline emissions). Even if it operates at that maximum level, its emissions will be fully offset by the emissions reductions that have already been provided, and there will be no net increase in emissions above what was actually being emitted historically before the offsets requirements were implemented.

An example helps illustrate this situation. Take a facility with maximum potential emissions of 100 tons per year of a non-attainment pollutant, but that has historically been operating at 50% capacity with emissions of only 50 tons per year. When the District starts to implement its regulatory efforts to come into attainment of the NAAQS, it implements an offsets requirement to cap emissions from major facilities at existing levels and ensure that any new increases from such facilities are offset with emission reductions elsewhere. The facility subsequently seeks to expand, such that its maximum potential emissions will be 150 tons per year. At that point, the facility must provide 100 tons per year in emissions offsets (achieved from shutdowns of other sources elsewhere), so that if it operated up to its 150 tpy maximum emissions level there will be no net increase over the 50 tpy it was emitting when the system was first implemented. If the facility provides the offsets and undertakes the project, its new potential to emit will be 150 tpy, but those emissions will be offset. If the facility then wants to make an additional modification, but one that will not increase its total potential emissions above 150 tpy, it does not need to provide any additional offsetting emission reductions to ensure that there is "no net increase" above its 50 tpy historical emissions rate. Even if the facility emits up to its full 150 tpy potential after this additional modification is implemented, the extra 100 tpy of emissions over the historical 50 tpy rate will be adequately offset by the 100 tpy of emissions reductions that have already been provided. If the facility wants to increase its PTE further, however, it will need to provide additional offsets. If it makes a subsequent modification that increase PTE to 200 tpy, for example, it

will need to provide an additional 50 tpy of offsets to ensure that there will be no net increase above historical baseline emissions levels.

The offsets requirements are therefore based on the same "actual-to-potential" test described in previous sections for determining the amount of offsets to be provided. Offsets are required for the facility's entire cumulative increase, which is the difference between the facility's actual emissions historically and its current maximum potential emissions. The first time the facility is modified after the baseline date, it must provide offsets for full amount of its PTE above its actual emissions baseline. Subsequently, further modifications require additional offsets for any additional increase in PTE above this actual emissions baseline. This is how the District implements its offsets requirements under the current regulations. The Proposed Amendments will not make any changes to these procedures, although they will specify in greater detail how exactly the calculations should be undertaken.

- **Current Regulations**

Section 2-2-606 in the current regulation sets forth the procedure for calculating the amount of offsets that must be provided pursuant to the offset requirements in Sections 2-2-302 and 2-2-303. It embodies the calculation principles outlined above, although it does not provide a great amount of detail. (Providing additional detail to make the procedures easier to understand and reduce the potential for ambiguity in areas such as this is a central purpose of the Proposed Amendments.) It states that offsets must be provided under Sections 2-2-302 and 2-2-303;[107] that offsets must be provided by the applicant of from the Small Facility Banking Account where appropriate; that offsets must be provided for the cumulative increase and multiplied by the applicable offset ratios in Sections 2-2-302 and 2-2-303; and that any excess offsets provided may be re-banked without charge. The section notes that offset requirements can be satisfied either by providing credits from the District's emissions bank or by reducing the offsets requirements through contemporaneous emission reduction credits.

- **Proposed Amendments**

Sections 2-2-606 through 2-2-609 in the Proposed Amendments set forth the procedures for determining the amount of offsets that must be provided for permitting of a new source or modification. They embody these same procedures in the existing regulations discussed above, but state with greater detail and specificity exactly how the calculations must be undertaken in specific situations. Offsets are required for the full amount of the facility's cumulative increase in emissions, which is the total increase in the facility's PTE associated with the current project being and all previous NSR permit issued for the facility since the applicable baseline date compared to historical baseline emissions levels (i.e., actual emissions at the time the offsets program was first implemented). The procedures specify (i) how the emissions increase associated with the current project is calculated (in Section 2-2-606); (ii) how the cumulative increase associated with each prior permit is calculated (in Section 2-2-607); and (iii) how all of these increases are summed to obtain the total cumulative increase

[107] Section 2-2-606 also references an offset requirement in Section 2-2-313, but this reference is redundant as that section was deleted in 2000.

for the facility, and any offsets already provided are subtracted out, to obtain the total offsets obligation associated with the permit application under review (in Section 2-2-608).

First, Section 2-2-606 sets forth the procedures for calculating the amount of emissions increase associated with the project that is currently being permitted. As explained above, the amount of offsets that will be required is on the "actual-to-potential" increase concept. For new sources, the project's increase is thus the full amount of the potential to emit of the source (over a zero emissions baseline, because the source by definition has never operated in the past). This scenario is addressed in subsection 606.1. For modifications to existing sources, the first time the source is modified after becoming subject to the offset requirements, the increase is measured based on the difference between PTE and the source's actual emissions. The increase associated with this modification is the difference between the source's actual emissions baseline before the modification, adjusted to reflect current regulatory standards (calculated in accordance with Section 2-2-603 as the "adjusted baseline emissions"), and its new potential to emit. This scenario is addressed in subsection 606.2. For subsequent modifications, after offsets have already been provided, any further increase is measured based on further increases in potential emissions above what has already been offset. The increase associated with such a modification is the difference between the potential to emit after the modification and the potential to emit before the modification, adjusted to reflect current regulatory standards. This scenario is addressed in subsection 606.3.[108] Section 2-2-606 also references the fact that Section 2-2-610 requires that cargo carrier emission be included in the cumulative increase calculations. The purpose of providing this additional reference is so that this element of the calculation is not overlooked.

Once the amount of the emissions increase associated with the project under review is calculated, the cumulative increase associated with the permit is determined by subtracting any contemporaneous on-site emissions reduction credits.[109] This calculation is set forth in proposed Section 2-2-607. This section also explains that the amount of Emission Reduction Credits associated with a permit is determined as of the time the permit is issued. Thus, when contemporaneous on-site emissions reductions are credited in connection with an NSR permit, that permitting action will not be reopened in the future to

[108] It is important to adjust the PTE to reflect any tightening of emissions limitations or other regulatory advances, so that *de facto* increases in capacity do not escape offset requirements. If, for example, a facility has a PTE of 100 tpy when operating at full capacity, and more stringent regulations come into effect that reduce its effective PTE to 50 tpy when operating at full capacity, a subsequent modification should provide additional offsets even if the PTE after the modification is still 100 tpy. In that case, the modification represents a doubling of the effective capacity of the facility, even though the nominal PTE is not increasing. The PTE adjustment to reflect current regulatory standards will require such modifications to provide offsets for the potential that there will be new emissions from the facility that would not have occurred absent the modification.

[109] This subtraction applies to contemporaneous on-site emission reduction credits only, not banked credits. The difference is that banked credits are provided to satisfy offset obligations, whereas contemporaneous on-site credits are applied to reduce the extent of the offset obligations in the first place. The arithmetic involved can be represented as: [emissions increase] – [contemporaneous on-site credits] = [banked credits provided]. Contemporaneous on-site credits and banked credits are ultimately both taken into account, just on different sides of the equation.

re-assess the cumulative increase associated with it – even if the date of the reductions recedes in time beyond the 5-year "contemporaneous" window applicable to future permit applications, or if regulatory standards change. In this way, the cumulative increase calculation associated with a permit application is "frozen" as of the date of the permitting action. Subsequent modifications may increase the total amount of the facility's cumulative increase, but any additional cumulative increase will be added on top of the cumulative increase associated with earlier permits. Those prior cumulative increase determinations will not be reopened in subsequent permit calculations.[110] Finally, Section 2-2-607 also explains that if an emission reduction is used to reduce a source's cumulative increase in connection with one permit, the same emission reduction cannot be used again to reduce a further cumulative increase in connection with a second permit, even if it is still within the 5-year "contemporaneous" period. This would allow "double-counting" of emission reduction credits, which would not be consistent with the concept of maintaining a "no-net-increase" under the Rule's offset provisions.

Section 2-2-608 then sets forth the procedure for adding up the total cumulative increase associated with a facility and determining the amount of offsets that need to be provided so that the facility's entire cumulative increase over its historical baseline emission levels is sufficiently offset. The amount of offsets required is the facility's total cumulative increase less the offsets that have been provided already in connection with past permits. The total is calculated by adding (i) the cumulative increase from the project being permitted (i.e., the project's increase in PTE minus any contemporaneous on-site ERCs) plus (ii) the un-offset cumulative increase from all previous permits issued since the applicable baseline date (i.e., for each previous permit, the cumulative increase minus the offsets provided in connection with the permit), including any for related sources as defined in Section 2-2-226.[111] The sum of the un-offset cumulative increases from all of these prior permits is the facility's un-offset cumulative increase, and offsets need to be provided for this amount (times the applicable offset ratio, which is 1:1.15 for NOx and POC at facilities with a PTE of 35 tpy or more and 1:1 in all other situations). Note that the calculation excludes permits that were issued for a source solely because the source lost its permit exemption. The calculation also excludes permits for sources that have been shut down and permanently removed from service. Once such sources have been permanently removed from service, their emissions are no longer counted as part of the facility's cumulative increase.

[110] For example, if a facility had a project in 2000 that increased its PTE by 10 tpy, and addressed that increase with 5 tpy of emission reductions from a shutdown in 1997 (which were "contemporaneous" at the time because they occurred within 5 years before 2000) and 5 tpy of banked credits, the cumulative increase will not be recalculated if the facility applies for another NSR permit in 2012, even though the on-site emission reduction in 1997 is no longer "contemporaneous" to 2012. In that case, the cumulative increase calculated in 2000 was 5 tpy (10 tpy in project emissions increase less 5 tpy in contemporaneous on-site emission reduction credits). When the facility applies for another NSR permit in 2012, that cumulative increase associated with that prior permit in 2000 will remain 5 tpy, and will not be revised because the 1997 reduction is no longer "contemporaneous" in 2012. (A 1997 on-site reduction would be ineligible to reduce the cumulative increase associated with the new project in 2012, of course. Any emission reductions used to reduce the cumulative increase associated with the 2012 project would need to have occurred between 2007 and 2012 in order to be "contemporaneous" with the 2012 project.)

[111] These related source cumulative increases are included under the provisions set forth in current Section 2-2-215, the definition of "facility", and are being moved to Section 2-2-608 to consolidate all of the calculation procedures in one regulatory section.

Finally, Section 2-2-609 provides that the APCO may establish and maintain a database to record the cumulative increase associated with each permit issued for a facility and the amount of offsets associated with it. Maintaining such a database is necessary administratively so that permit engineers do not have to go back and review a facility's entire permitting history back to 1991 every time they receive a permit application for the facility. By keeping running totals of historical cumulative increase and offsets provided in connection with past permits in a database, a permit engineer can readily determine what additional offsets may need to be provided in connection with a new permit. The District already maintains a database of cumulative increase and offsets, and this provision will codify that practice in Regulation 2, Rule 2. District Staff make every effort to ensure that the information contained in this database is accurate, and Section 2-2-609 provides that the database may be presumptively used to establish a facility's cumulative increase. The information in the database shall not be binding in the case of an error, however, either on the APCO or on any other person. The APCO may amend the database if further information shows that it contains an error.

v. Addressing Cargo Carrier and Fugitive Emissions in NSR Calculations

Sections 2-2-610 and 2-2-611 round out the Rule's procedural provisions by addressing how cargo carrier emissions and fugitive emissions are treated for purposes of applying the NSR requirements. These requirements are currently set forth in the definition of "Facility" in Section 2-2-215, but they are more in the nature of emission calculation procedures than elements of the definition of what constitutes a "facility". The proposed amendments are therefore moving these provisions to the "600s" sections.

Proposed Section 2-2-610 provides that emissions from cargo carriers such as ships and trains (but excluding motor vehicles such as trucks) must be included in applying the offset requirements. Thus, where cargo carriers serve a facility by bringing raw materials to the facility or shipping the facility's products, the emissions associated with them must be included in determining whether the facility's emissions are over the applicability thresholds of the offsets requirements, and if so, the amount of offsets that need to be provided. Such emissions are accounted for as part of the source that receives or loads the cargo. As with the current provisions for cargo carriers, these emissions are included for offsets purposes only, and not for application of other provisions of Regulation 2, Rule 2, such as the District BACT requirement in Section 2-2-301 and the PSD provisions in Sections 2-2-304 through 2-2-307.

In addition, with respect to ship traffic, the cargo carrier provisions include emissions from cargo carriers only within the District and within California Coastal Waters adjacent to the District; and only to the extent that they will have a substantial impact on air quality within the District. Section 2-2-610 codifies the District's practice of counting ship emissions out to the pilot station 11 nautical miles from the Golden Gate Bridge. The District does not normally consider ship emissions beyond that point to have any substantial impact on air quality within the District. Section 2-2-610 contains a provision for including additional ship emissions if they do have such an impact, however (for example, if ships were

to sail close to the coastline for some reason after leaving the pilot station). Any such additional emissions will be considered on a case-by-case basis.

Proposed Section 2-2-611 provides that fugitive emissions – that is, emissions that come from vents, valves, and the like, and not from an intended emission point such as an exhaust stack – should be included in all emissions calculations for purposes of applying NSR under Regulation 2, Rule 2.

The sole exception is for purposes of determining whether a facility is over the 100 tpy applicability threshold that subjects it to PSD permitting under Section 2-2-224.1. If the facility is in one of the 28 categories of facility listed in Section 169(1) of the Clean Air Act, and is therefore subject to the 100 tpy threshold for PSD permitting, fugitive emissions <u>are not</u> included in determining whether its emissions exceed that 100 tpy threshold. If the facility is in any other category, it is subject to the 250 tpy threshold for PSD permitting, and its fugitive emissions <u>are</u> included in determining whether its emissions exceed this PSD applicability threshold. In addition, at all facilities subject to PSD permitting, fugitive emissions are included in determining whether emissions increases are "significant"; this rule for emissions increases applies equally regardless of the facility category. These rules for counting fugitive emissions in PSD permitting mirror how fugitive emissions are addressed under the federal PSD program.

h) Definitions – Sections 2-2-201 through 2-2-227

The Proposed Amendments also make certain revisions to the definitions provided in Regulation 2, Rule 2. Certain redundant definitions are being deleted while a few new definitions are being added; some general definitions applicable beyond just the NSR program will be moved to Regulation 2, Rule 1, which addresses general permitting provisions; some current definitions will be retained but with revisions to clarify what they mean; and all of the definitions will be reorganized and renumbered into alphabetical order to make them easier to use.

In particular, the new PSD provisions that are being added need some additional definitions in order to implement them. As discussed in Section IV.B.2.a. of this Staff Report, the Proposed Amendments add a new definition of "PSD Project" in Section 2-2-224 to specify the applicability test for the PSD requirements, which apply to "any PSD Project". In addition, several supporting definitions are being added to help implement this term, including "Net Emissions Increase" in Section 2-2-220 and "Creditable" in Section 2-2-207, which specify how the "netting" analysis is conducted for purposes of PSD applicability. In addition, certain other supporting definitions are being added, including "PSD Pollutant" in Section 2-2-223, which defines the universe of pollutants subject to the PSD requirements; "Greenhouse Gases", or GHGs, in Section 2-2-213, which sets forth the six specific constituents that make up that pollutant and the calculation methodologies that shall be used to measure them; and "Indian Governing Body" in Section 2-2-216, which sets forth which specific Indian bodies must be provided notice of proposed PSD permitting decisions.

These definitions that will be used in implementing the PSD requirements are being set forth specifically in Regulation 2, Rule 2, because they are terms that are used in the District's own regulatory provisions

implementing PSD. A number of other important terms related to PSD permitting are being incorporated by reference. For these terms, the Proposed Amendments do not include separate definitions in Regulation 2, Rule 2, they simply incorporate the definitions by reference to the federal regulations that use them. This incorporation-by-reference is set forth in provisions incorporating each of the substantive requirements for PSD permitting in Sections 2-2-304 through 2-2-307, which state that the PSD permitting requirements will be applied according to and subject to all of the requirements for federal permitting under the Code of Federal Regulations. These requirements include the definitions provided there, as PSD permitting under the federal program that is being referenced is implemented using those definitions. This incorporation-by-reference principle is also explicitly stated in Section 2-2-103, which establishes the general principle that governs the incorporation-by-reference of the federal PSD. Section 2-2-103 explicitly provides that where federal PSD requirements are incorporated by reference, all associated procedures, definitions, and other regulatory provisions are incorporated as well. In addition, Section 2-2-103 also identifies certain specific definitions about which EPA Region IX staff expressed concerns and clarifies that these are also included, including the terms "baseline concentration", "major source baseline date", "baseline area", "secondary emissions", and "subject to regulation". (This list is illustrative rather than exhaustive; all applicable definitions are covered by Section 2-2-103 whether specifically listed or not.) These provisions will make clear – and enforceable as a matter of law – that all applicable definitions that need to be included in Regulation 2, Rule 2, for implementation of the PSD program under 40 C.F.R. Section 51.166 are included. All such definitions are either set forth specifically in a definition contained in the Rule, or they are incorporated by reference to the federal PSD requirements. EPA has indicated that either approach (i.e., specific definition in District rule or incorporation-by-reference of federal definition) is approvable under 40 C.F.R. Part 51.

This incorporation by reference of PSD-related definitions also replaces the need to have certain PSD terms defined in Regulation 2, Rule 2. Where terms are no longer used in the District's regulation, and are simply part of the PSD provisions that will now be incorporate by reference, there is no need to specify them explicitly in the District's regulation.[112] The specific definitions in the current Regulation 2, Rule 2, that fall into this category include: Section 2-2-202, Baseline Area, PSD; Section 2-2-203, Baseline Concentration, PSD; Section 2-2-204, Baseline Date, PSD; Section 2-2-205, Baseline Period, PSD; Section 2-2-219, Impact Area; Section 2-2-231, Point of Maximum Ground Level Impact; Section 2-2-232, Prevention of Significant Deterioration (PSD) Increments; and Section 2-2-222 Modeling, PSD.[113] These definitions are therefore being deleted. The terms will of course continue to have importance for permit applications that are subject to the PSD requirements, but they will be defined by reference to

[112] It is also worth noting that although these definitions were intended to support PSD permitting in the District, they were never ultimately approved by EPA for that purpose. Since the District's PSD program was never approved by EPA, these definitions were never effective for purposes of PSD permitting.

[113] Note that the definition of "modeling" in current Section 2-2-222 also serves to set forth substantive requirements for conducting PSD air quality modeling. The proposed revisions set forth requirements for PSD modeling in Section 2-2-305.3, which requires modeling to follow EPA's guidelines in Appendix W of 40 C.F.R. Part 51 (among other requirements).

the definitions contained in the federal regulations, per the incorporation by reference and the provisions of Section 2-2-103.

i) General Provisions – Sections 2-2-101 through 2-2-103

The general provisions in the "100s" sections in District rules typically contain a description of the rule, certain general applicability requirements or exemptions, and other similar provisions. The Proposed Amendments contain three such sections in Regulation 2, Rule 1.

Proposed Section 2-2-101 is in the current version of the Rule and sets forth a general description of the Rule's purpose and applicability. This general description is not a substantive provision, and the Proposed Amendments do not make any substantive changes to the language of the provision in any event. The Proposed Amendments simply revise certain elements to make the description more accurate and comprehensive, such as (i) specifying that the NSR provisions apply to Permits to Operate for new and modified sources, in addition to Authorities to Construct for such sources; (ii) referring generally to all aspects of the New Source Review requirements of the federal and California Clean Air Acts, instead of only to certain specific provisions of those laws; and (iii) removing a statement that 40 C.F.R. Sections 51.165 and 51.166 are incorporated by reference, consistent with the removal of existing Sections 2-2-310 and 2-2-311 as discussed below.

Proposed Section 2-2-102 sets forth an "exemption" for secondary emissions from abatement devices. It provides that such emissions must use RACT to control secondary emissions. This provision is in current Section 2-2-112 and is being retained in Section 2-2-102 with no substantive changes. The provision includes only minor language changes to address a potential for confusion among regulatory terms identified by EPA Region IX Staff regarding the term "secondary emissions". This term is being removed to avoid any potential for such confusion. The exemption will apply (as it always has) to emissions of secondary pollutants that are the direct result of the use of a control device or emission reduction technique used on a source to comply with applicable BACT or BARCT control requirements for another pollutant. This provision will be applied by District Staff in reviewing permit applications in the same manner as every other regulatory provision, using best engineering judgment and other reasonable analytical approaches.

(Note also that two other provisions presented as "exemptions" in the current rule are being deleted because they will be addressed in different sections of Regulation 2. The current provision in Section 2-2-111, which sets forth the levels at which ambient air quality monitoring is required as part of an application for a PSD Project, will be addressed in the PSD provisions in the Rule. The current provision in Section 2-2-114, which sets forth the applicability criteria for the "Case-By-Case MACT" requirement, will be addressed through the Title V permitting program in Regulation 2, Rule 6. These provisions are discussed elsewhere in this Staff Report.)

Proposed Section 2-2-103 states explicitly the legal principles that govern the incorporation by reference of the substantive requirements of the federal PSD permitting program in Sections 2-2-304

through 2-2-306. This provision is discussed in more detail in connection with those provisions in Section IV.B.2.a. of this Staff Report above.

j) Provisions Removed from Current Regulation 2, Rule 2

As noted above, the Proposed Amendments will reorganize the structure of Regulation 2, Rule 2 to make it more logical and simpler to follow and understand. In so doing, a number of the substantive provisions in the current Regulation 2, Rule 2 will be moved to different locations within the Rule, although they will continue to apply substantively in largely the same way, as explained in this Staff Report. For example, as discussed in Section IV.B.2. above, the references to PSD requirements that are currently scattered in different areas of the rule will be consolidated into the four substantive PSD requirements in Section 2-2-304 through 2-2-307. Certain other provisions in the current Regulation 2, Rule 2 will be deleted, in cases where they are redundant, should be moved to other permitting programs in Regulation 2, or are otherwise not appropriate for inclusion in the NSR rule. These provisions that are being removed in the Proposed Amendments are addressed below.

Denial for Failure to Comply with BACT and Offsets Requirements: Current Sections 2-2-310 and 2-2-311 provide that the APCO shall deny a permit application if it does not comply with the BACT and offsets requirements in Sections 2-2-301 through 2-2-303. The principle that a permit applicant cannot obtain a permit unless it complies with all of the legal requirements for obtaining the permit is a fundamental legal principle that is inherent in every permitting system, and so stating it explicitly here in the context of the BACT and offsets requirements is not necessary. (It is also redundant, because Section 2-1-304 provides generally that the APCO cannot issue any permit under Regulation 2 if the applicant does not comply with all applicable legal requirements.) Moreover, stating explicitly that the application will be denied if it fails to comply with BACT and offsets begs the question of whether it will be denied for failure to comply with any other applicable NSR requirement, such as the PSD requirements. An argument could be made that because Sections 2-2-310 and 2-2-311 do not say that the application will be denied for failure to comply with any of these other requirements, the APCO does not have the authority to deny an application in that situation. These redundant sections are therefore being removed to avoid the potential for any such misinterpretation. Note that Staff do not intend to change the current rule that an application that does not comply with BACT or offset requirements will be denied (unless the applicant can amend the application to satisfy them). Staff's intent is merely to delete redundant (and potentially confusing) provisions. To address any potential concern that these deletions could be seen as a relaxation on this point, the proposed amendments will also specifically mention BACT and offset requirements in Section 2-1-304. That provision will explicitly provide that the APCO will deny an Authority to Construct or Permit to Operate that does not comply with all applicable requirements, "including but not limited to the BACT and offsets requirements in Regulations 2-2-301 through 2-2-303 . . . ."

Incorporation by Reference to EPA's SIP Approval Criteria: Current Sections 2-2-314 and 2-2-315 refer to EPA's criteria for approving state major non-attainment NSR and PSD permitting programs in 40 C.F.R. Sections 51.165 and 51.166, respectively. Sections 2-2-314 and 2-2-315 state that these federal SIP

approval criteria are incorporated by reference into the District's NSR rules. These references are not necessary or appropriate in the District's rules, because the District has its own NSR program and it is this regulatory program that creates the legal requirements that apply for NSR permits in the Bay Area, not EPA's SIP-approval criteria. EPA's approval criteria are obviously highly relevant to the District's NSR program and District Staff have developed the program to satisfy all approval criteria in EPA's regulations, but it is the District's program that will govern NSR permitting in the Bay Area, not EPA's SIP-approval requirements. Current Sections 2-2-314 and 2-2-315 are therefore being deleted; in the few places in the District's NSR rules where specific regulatory provisions in 40 C.F.R. Sections 51.165 or 51.166 are incorporated by reference, the applicable District regulatory provision will do so by citing the specific provision being incorporated. These situations are discussed individually in other sections of this Staff Report.

Case-By-Case MACT Requirement: Current Section 2-2-317 provides that certain new and modified sources must implement "Best Available Control Technology for Toxics", or "TBACT". This provision is intended to implement Section 112 of the Clean Air Act, which addresses hazardous air pollutants. CAA Section 112 requires EPA to develop such regulations for controlling hazardous air pollutant emissions according to a specified schedule. It requires EPA to adopt nationwide regulations, called "National Emissions Standards for Hazardous Air Pollutants", or "NESHAPs", based on a level of control known as "Maximum Available Control Technology" or "MACT". Section 112(j) also established a "backstop" mechanism to ensure that these pollutants would be regulated even if EPA failed to act by the statutory deadlines set forth in the Act. Specifically, the section provides that if EPA fails to promulgate nationwide NESHAPs by the statutory deadlines, then individual permitting agencies are required to implement the same level of emissions control – "MACT" – on a case-by-case basis (i.e., by making determinations of what MACT requires for individual sources at the time of permitting, rather than applying a single nation-wide NESHAP rule applicable to all sources). Section 112(j) further specifies that this "case-by-case MACT" requirement should be implemented through the Title V operating permit process. This approach makes sense, because the "case-by-case MACT" requirement applies both to new and modified sources and to existing sources. Putting the requirement into the Title V program will make it applicable to existing sources, whereas the New Source Review program applies only to new and modified sources. Staff are therefore moving the "case-by-case MACT" requirement to the Title V permitting program in Regulation 2, Rule 6, and removing it from the NSR program in Regulation 2, Rule 2.[114] See the discussion regarding the proposed revisions to the Title V program in Section IV.D. below for further details.

C. Proposed Revisions to Regulation 2, Rule 4 (Emissions Banking)

Regulation 2, Rule 4 sets forth the procedures applicable for the banking of emissions reduction credits. Emissions banking allows facilities that shut down an existing emissions source to "bank" the emissions reductions that result from the shutdown, and then either use the banked credits to offset emissions

[114] This includes removing the substantive requirement in current Section 2-2-307, as well as the "exemption" in Section 2-2-114 that specified the applicability criteria for determining when a new or modified source was subject to the requirement.

increases from new projects at the facility in the future or sell the banked credits to another facility for use with new projects there. This banking system supports the implementation of the emissions offset requirements in District Regulations 2-2-302 and 2-2-303. Banking of emission reduction credits is central to the functioning of the NSR offsets requirements, in that (i) it encourages facilities to shut down under-utilized production capacity when it is no longer needed and (ii) it allows flexibility in siting new and modified sources in locations where there may not be an existing source to shut down for offsets purposes. (These functions of the credit banking provisions are described in more detail in connection with the offsets requirements in Section IV.B.3.g.iv. above.)

Regulation 2, Rule 4 sets forth the accounting procedures that govern emissions banking under the NSR program. The Proposed Amendments include two substantive changes to the current procedures. Both of them are related to the addition of particulate matter regulatory requirements addressing $PM_{2.5}$.[115]

The first change adds $PM_{2.5}$ as a specific pollutant in the list of pollutants in Section 2-4-203 for which emission reduction credits can be banked.

The second change creates a mechanism by which the District can establish the amount of $PM_{2.5}$ emission reductions that are reflected in existing banked PM_{10} credits. $PM_{2.5}$ is a subset of PM_{10}, and so for any given amount of PM_{10} emissions, a certain fraction of those emissions will be made up of $PM_{2.5}$. The District's offset requirements for particulate matter have never had requirements specific to $PM_{2.5}$ emissions before, however. As a result, in banking particulate matter emissions reductions in the past, the banking system has accounted only for the amount of PM_{10} involved in an emission reduction and not the amount of $PM_{2.5}$. Now that the particulate matter offset provisions are being updated to target $PM_{2.5}$ specifically – and $PM_{2.5}$ emissions reductions will be required to offset new increases in $PM_{2.5}$ emissions from new projects – the amount of $PM_{2.5}$ reflected in these earlier reductions will need to be established. The Proposed Amendments create a mechanism for doing so.

The conversion mechanism will also allow existing banked credits that may have been created based only on the filterable portion of the PM emissions to account for the condensable portion as well. As discussed above in Section IV.A.2., per EPA requirements the Proposed Amendments will specify for the first time that the condensable portion of PM emissions must be taken into account for all purposes in NSR permitting. Historically, in the majority of cases only the filterable portion of PM emissions were accounted for, and thus many existing banked PM credits are based on the filterable portion only. Now that the condensable portion must be accounted for in NSR permitting, the District will need to determine the condensable portion of existing PM credits for purposes of implementing the PM offset requirements in Section 2-2-303. The conversion mechanism being created in the Proposed

[115] Two other minor non-substantive changes are (i) an update to the cross-reference to the definition of "Emission Reduction Credit" in Section 2-4-201 to reflect the renumbering in the Proposed Amendments to Regulation 2, Rule 2; and (ii) the removal a redundant reference in current Section 2-4-301.8 regarding banking of emission reduction credits from mobile sources, because the District no longer credits emission reductions from mobile sources and so there is nothing for this provision to apply to.

Amendments will allow existing credits that were based only on the filterable portion to be adjusted to account for the condensable portion as well.

There are a number of provisions that, working together, will create this conversion mechanism. **Proposed Section 2-4-416** creates a provision for the owner of an existing PM_{10} banked credit that has not yet been used to apply to the District to have the credit re-evaluated and the $PM_{2.5}$ fraction determined. The provision also covers applications for banked credits that were based only on the filterable portion of the PM emissions to be recalculated taking into account the condensable portion as well. As emissions banking applications, these applications would be subject to the same application fees as for the creation of a new banked credit. Based on the experience of District Staff in conducing the research and analysis regarding existing banked credits that would be required to process a conversion application, requiring the same processing fees as for new banking applications is appropriate to defray the cost of the Staff resources that will be involved.[116]

Proposed Sections 2-4-602 and 2-4-603 provide the procedures under which the amount of the $PM_{2.5}$ fraction and the amount of the condensable portion of the emissions, respectively, will be calculated. **Proposed Section 2-4-602** provides that an existing banked PM_{10} credit will have the $PM_{2.5}$ fraction calculating by (i) determining the appropriate $PM_{10}/PM_{2.5}$ conversion factor, based on the nature of the PM emissions from the source that was shut down to create the banked credit; and then (ii) multiplying the amount of the PM_{10} credit by that conversion factor. This conversion process will result in a banked PM credit that is expressed as a certain amount of PM_{10} credit and a certain amount of $PM_{2.5}$ credit (which will be somewhere between 0% and 100% of the PM_{10} credit, depending on the nature of the source that was shut down to create the credit).

Subsections 602.1 through 602.4 provide further guidance on how the appropriate conversion factor will be calculated. In cases where source test data is available from the source that was shut down to create the emission reduction credit, or from a similar source with the same PM emissions profile, that test data can be used to establish the conversion factor per subsections 602.3 and 602.4. Where no such source-specific test data is available, conversion factors can be drawn from published emissions factors such as EPA's AP-42 factors or other similarly reliable sources, per subjection 602.2. In addition, as the District develops experience and expertise with making these conversion factor determinations, it will publish conversion factors for common source categories in the Permit Handbook per subsection 602.1. These subsections set forth the various alternatives for calculating the appropriate conversion factor to make it clear that a "rule of reason" will apply in determining what information will be used in making the conversion determination. The District will make the determination using the best available information that, from an engineering perspective, has adequate assurances of accuracy and reliability. The information that will be available for the conversion process for each individual banked credit will necessarily depend on the specific circumstances of each credit, and the proposed language of this section will provide flexibility so that the most appropriate information available will be used in each specific case.

[116] Further discussion of the basis for the application fee for the conversion application is provided in May 25, 2012, Background Discussion document. *See* p. 16, Comment No. I.D.2.d.

Proposed Section 2-4-603 sets forth a similar conversion procedure for determining the amount of condensable emissions associated with an existing PM credit that was originally based only on filterable PM emissions. The conversion will be undertaken by (i) determining an appropriate filterable/condensable conversion factor, based on the type of source that was shut down to create the credit; and then (ii) multiplying the amount of the existing PM credit by that conversion factor. (Note that condensable particulate matter is all very small in diameter and is thus both PM_{10} and $PM_{2.5}$; references to condensable particulate matter therefore generally do not differentiate between PM_{10} and $PM_{2.5}$.) If the evidence demonstrates that the emissions from the source that was shut down to create the credit actually had filterable emissions that were lower than the amount credited in the original PM_{10} credit, the applicant will not get the benefit of this over-estimate in the original application; in that case, the amount of the condensable credit will be based on the actual emissions from the source that was shut down, not the amount reflected in the banked credit (although the amount of the existing filterable credit will not be reduced if it was granted through a valid banking procedure).

In addition, **Section 2-4-405** will be amended to require applications for conversions of existing banked PM credits to go through the same public notice and comment process as applications for new PM emissions banking credits. Under Section 2-4-405, the APCO must publish notice of any proposed approval of credit banking in the amount of 40 or more tons per year, and must provide the public with an opportunity to review and comment upon the basis for such approval. For the same reasons that this public notice and comment process is provided for creation of new credits of 40 or more tons per year, the Proposed Amendments will provide it for re-evaluation of existing credits worth 40 or more tons per year.

Finally, it is also important to note that while the bulk of the Proposed Amendments will not become effective until final approval by EPA, District Staff are proposing that these amendments to the banking procedures in Regulation 2, Rule 4, take effect immediately upon adoption by the District's Board of Directors. A number of commenters have expressed a concern that the conversion of existing banked credits to account for the $PM_{2.5}$ fraction and/or condensable portion could take some time, and that it could unduly delay the processing of permit applications when the Proposed Amendments take effect. To address this concern, one commenter suggested that the District should make the amendments to the banking regulations specifying this conversion process effective immediately upon adoption, rather than in the future upon EPA approval, so that holders of existing PM_{10} credits could start the conversion process immediately. District Staff agree that this is a good suggestion and are therefore recommending this approach to the Board for adoption. Unlike with the rest of the revisions to the NSR regulations, there is no great concern regarding a potential "gap", or inconsistency, between the effective District regulations and the SIP-approved NSR requirements that have been approved by EPA. Moreover, there is a significant benefit from having these provisions go into effect immediately so that holders of existing banked PM_{10} credits can start the conversion process immediately. This will allow them to update their

credits to accurately reflect $PM_{2.5}$ and PM_{10} emissions – and both filterable and condensable emissions – as soon as possible.[117]

D. Proposed Revisions to Regulation 2, Rule 6 (Title V – Major Facility Review)

The fourth rule in Regulation 2 that will be updated under the Proposed Amendments is the District's Title V Major Facility Review permitting rule in Regulation 2, Rule 6. The changes involved in the Proposed Amendments are outlined in detail below.[118]

1. Addition of GHGs to Title V Permit Program

As discussed above, one of the primary motivations for the current rulemaking effort is to add greenhouse gases to District permitting programs, now that they are regulated by EPA. Now that EPA is regulating GHGs under the Clean Air Act, all state Title V implementing programs need to include GHGs.

The proposed revisions to the Title V regulations will add GHGs to Title V permitting by making GHGs a "Regulated Air Pollutant" as defined by Section 2-6-222. Specifically, the revisions add new subsection 222.6 to the definition, which explicitly states that GHGs are a "Regulated Air Pollutant" subject to Title V permitting, but only at facilities with GHG emissions over 100,000 tons per year CO_2e. This revision will bring GHGs into Title V permitting at a 100,000 ton-per-year CO_2e threshold, the threshold level that EPA has promulgated in its Tailoring Rule.

The Title V permitting requirements under District Regulation 2, Rule 6 apply to any "Major" emitter (which is defined as emitting 100 tons or more per year on a mass basis) of any "Regulated Air Pollutant" (which for GHGs will now be defined as 100,000 tons or more per year CO_2e). A facility will thus be subject to Title V permitting based on its GHG emissions based on a two-part test: it must exceed the 100 tpy absolute mass threshold and the 100,000 tpy CO_2e threshold. If GHG emissions exceed one threshold but not the other, the facility will not be subject to Title V permitting as a result of its GHG emissions (although emissions of other pollutants could still trigger Title V permitting if they are 100 tons or more per year). This two-part applicability threshold mirrors EPA's applicability approach adopted under the Tailoring Rule. To make sure that it is clear how this two-part applicability test works to anyone reading the regulations, the proposed revisions add an explanatory note at the end of the Major Facility definition in Section 2-6-212 to this effect.

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[117] Similar concerns were also expressed regarding the market for $PM_{2.5}$ credits. Some commenters were concerned that the market for these credits will not be able to function properly until all or a significant portion of the existing inventory of marketable PM_{10} credits is converted, in order that market participants can understand the extent of the credits that are available for purchase. Allowing the conversion process to start immediately will help address this concern as well. Anyone holding existing PM_{10} credits who is interested in marketing them will have a strong incentive to apply to the District to have the conversion undertaken as soon as possible. District Staff anticipate that this process will occur fairly quickly. District Staff addressed this issue in its May 25, 2012, Background Discussion document (see pp. 14-15, Comment No. I.D.2.b.).

[118] The Proposed Amendments' substantive revisions are outlined below. The Proposed Amendments also include a few minor clerical revisions such as making grammatical clarifications and adding cross-references.

In addition, the Proposed Amendments to Regulation 2, Rule 6 add associated GHG regulatory thresholds for certain other elements of Title V permitting.[119] Specifically:

- Section 2-6-239, Definition of "Significant Source" for Purposes of Application Materials: Section 2-6-405, which specifies the information that an applicant needs to provide in an application for a Title V permit, requires that a calculation and summary of a source's emissions must be submitted for any source at a Title V facility that is "significant" as defined in Section 2-6-239. Current Section 2-6-239 defines "significant source" as any source with emissions of over 2 tons per year of any regulated air pollutant or over 400 pounds per year of any hazardous air pollutant. These threshold significance levels are set at 2% of the Title V major facility applicability thresholds (100 tons per year for regulated air pollutants and 10 tons per year for any single hazardous air pollutant), and they reflect the percentage at which the District treats an individual source at a Title V facility as making a significant contribution to the facility's total emissions. Since the District is establishing an effective Title V applicability level for GHGs at 100,000 tons per year of GHGs, the Significant Source definition needs to reflect a significance level for GHGs at 2% of this threshold level. The proposed revision to Section 2-6-239 therefore establishes the definition of "significant source" for GHG emissions at 2,000 tons per year CO_2e – i.e., 2% of the effective 100,000 ton-per-year CO_2e Title V applicability threshold for GHGs.
- Section 2-6-312, Major Facility Review for Smaller Facilities: Section 2-6-312 requires that any facility with actual emissions over certain thresholds must demonstrate that it is not a Title V "major facility" subject to Title V permitting requirements. These threshold actual emission levels are designed to cover facilities whose actual emissions do not exceed the "major facility" levels, but are high enough that the facility potential to emit (PTE) may in fact exceed the "major facility" levels.[120] If a facility's actual emissions exceed the levels specified in Section 2-6-312, it must demonstrate that its PTE is below the major facility thresholds and it is not subject to Title V permit requirements (or alternatively that it has a synthetic minor permit). Otherwise, it must submit a Title V permit application. Current Section 2-6-312's threshold levels are established at 25% of the major facility threshold levels (25 tpy for regulated air pollutants, 2.5 tpy for any single hazardous air pollutant, and 6.25 tpy for all hazardous air pollutants combined). The proposed revisions add a threshold level for GHGs at 25% of the effective 100,000 tpy CO_2e major facility threshold for GHGs, or 25,000 tpy CO_2e. Facilities with actual GHG emissions

[119] There is also a related provision in current Section 2-6-404.8 that established regulatory thresholds for certain existing facilities to submit their initial Title V permit applications by October 20, 2000. This provision is no longer necessary because the time for initial applications for these facilities has passed. The Proposed Amendments therefore do not establish a corresponding threshold for GHGs, and instead delete this provision as obsolete.

[120] Facilities become subject to Title V permitting based on their "Potential to Emit", which is defined in Section 2-2-217 as the maximum amount of emissions the facility could possibly have, based on permit limits, design characteristics, *etc*. Even if a facility's actual emissions in the past have not exceeded the Title V applicability thresholds, the facility still may be subject to Title V if it could potentially have emissions over the thresholds.

above this level would need to make a Section 2-6-312 PTE demonstration with respect to their GHG emissions.[121]

- Section 2-6-423, District Procedures for Synthetic Minor Operating Permits: One option for complying with Title V requirements for facilities that have the physical capability to emit more than the Title V threshold levels is to obtain a "synthetic minor" operating permit. These permits establish enforceable emissions limits to ensure that the facility's emissions will not exceed any Title V threshold levels. These permits "synthetically" create a minor facility out of what would otherwise be a major facility by capping the facility's PTE through the enforceable permit limits. The current synthetic minor permitting procedures in Section 2-6-423 require that emission limits in synthetic minor operating permits be set at 95% of the Title V major facility threshold levels, which provides a 5% cushion to ensure that even if a facility exceeds its permit limit somewhat, it will still not become a Title V major facility.[122] The proposed revisions add a synthetic minor limit for GHGs at 95% of the effective 100,000 tpy CO_2e major facility threshold for GHGs, or 95,000 tpy CO_2e. Synthetic minor permits for GHGs will need to include an enforceable GHG emissions limit at this level.

The proposed revisions also add new definitions of GHG and CO_2e to specify how these terms are to be used in implementing the Title V requirements for GHGs.

- GHG Definition: Proposed new Section 2-6-245 defines GHGs as the term is defined by EPA in its federal regulations, as a single air pollutant made up of six constituents: carbon dioxide, nitrous oxide, methane, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride. The definition also specifies how GHGs are to be measured. For determining whether a facility is a "major" emitter, GHGs are measured as absolute mass (i.e., without any adjustment applied to reflect the global-warming potential of the various constituents). If a facility's total mass of GHG emissions is below 100 tons per year, it is not a "major" emitter of that pollutant as defined in the Clean Air Act. For all other purposes, GHGs are measured as CO_2e, which weights each constituent based on its global warming potential. If a facility's GHG emissions measured as CO_2e are less than 100,000 tons per year, the emissions are not a "regulated air pollutant" as defined in Section 2-6-222 and the facility is not a Title V major facility because of its GHG emissions (although it may still be major for other pollutants).

[121] Note that for GHGs, the facility can show either (i) that PTE is below 100,000 tpy CO_2e or (ii) that PTE is below 100 tpy on an absolute mass basis in order to demonstrate that it is not subject to Title V permitting. If a facility's emissions are below either of these threshold levels, it is not a major emitter (*i.e.*, over 100 tpy absolute mass) of a regulated air pollutant (*i.e.*, over 100,000 tpy CO_2e).

[122] Synthetic minor emissions limits are legally enforceable limits, and so an exceedance of these 95% synthetic minor conditions would be a violation of District Regulation 2-6-307 and would subject the facility to enforcement action. In such a case, the District would take such action as may be necessary to ensure that any additional exceedances of the 95% level do not occur (including but not limited to imposing monetary penalties as a deterrence against future violations and injunctive relief to require operational changes to prevent problems from recurring). 95% of the major source threshold level is an action level so that the District can identify potential problems and take appropriate action without risking an actual exceedance of the major facility thresholds.

- CO_2e Definition: Proposed new Section 2-6-246 defines CO_2e and specifies how the weighting of GHG emissions for global warming potential will be calculated. The calculation procedure will follow the method that EPA has prescribed in its Title V regulations, using the weighting factors set forth in Table A-1 to subpart A of 40 C.F.R. Part 98.

These definitions track the federal definitions adopted by EPA.

2. Implementation of the "Case-by-Case MACT" Requirement Through Title V Permitting

The Proposed Amendments will also implement the Clean Air Act's "case-by-case MACT" requirement through the District's Title V program, instead of through NSR permitting as provided for in the current regulations. The Clean Air Act specifies that this "case-by-case MACT" requirement is to be implemented through the Title V permitting process, and this change will make the District's program consistent with the Act in this respect.

Section 112 of the Clean Air Act requires EPA to develop nationwide regulations for the control of hazardous air pollutant emissions, called "National Emissions Standards for Hazardous Air Pollutants", or "NESHAPs". Section 112 requires EPA to establish these NESHAPs based on a level of emissions control known as "Maximum Available Control Technology" or "MACT". Section 112 set forth a schedule by which EPA was required to adopt these NESHAPs; and it also established a "backstop" mechanism, in Section 112(j), to ensure that these pollutants would be regulated even if EPA failed to act by the statutory deadlines. Specifically, Section 112(j) provides that if EPA fails to promulgate nationwide NESHAPs by the statutory deadlines, then individual permitting agencies are required to implement the same level of emissions control – "MACT" – on a case-by-case basis (i.e., by making determinations of what MACT requires for individual sources at the time of permitting, rather than by applying a single nation-wide NESHAP rule applicable to all sources). Section 112(j) further specifies that this "case-by-case MACT" requirement should be implemented through the Title V operating permit process.[123] As discussed above in Section IV.B.3.j., the District's current permitting rules implement this "case-by-case MACT" requirement through the NSR program under Regulation 2, Rule 2, not through the Title V program. This could potentially be problematic, because the Section 112(j) "case-by-case MACT" requirement applies to existing sources as well, not just to new and modified sources that are subject to NSR permitting. To address this situation and to make the District's implementation of the "case-by-case MACT" requirement consistent with Section 112(j), the Proposed Amendments move this requirement from Regulation 2, Rule 2, to Regulation 2, Rule 6.

The Proposed Amendments make this change by deleting the current case-by-case MACT requirements in Regulation 2-2-317 (and related provisions in Regulation 2, Rule 2) and adding corresponding provisions in the Title V requirements in Regulation 2, Rule 6. Specifically, **proposed new Section 2-6-315** adds a case-by-case MACT requirement for Title V permitting, setting forth the applicability criteria

[123] *See, e.g.*, CAA § 112(j)(4) (permit applications reviewed and approved or disapproved under the Title V permitting provisions of CAA § 505); CAA § 112(j)(5) (permits issued under Title V).

for this requirement. Under Section 2-6-315, the requirement will apply to any facility where (i) the facility has a potential to emit hazardous air pollutants (HAPs) above the Title V "major" facility threshold (10 tpy of any single HAP or 25 tpy of any combination of multiple HAPs); (ii) the facility is in a category or subcategory of HAP sources listed by EPA for regulation under CAA Section 112; and (iii) EPA has failed to promulgate a NESHAP for that category or subcategory by the applicable deadline under Section 112. For any facility that satisfies these applicability criteria, the Title V permit must implement the case-by-case MACT requirement and include a permit limit on the facility's HAP emissions that reflects a MACT level of control. To assist in implementation of this requirement, the Proposed Amendments also add a definition of "Maximum Achievable Control Technology (MACT)" in **proposed Section 2-6-247**, which mirrors the MACT standard as set forth in CAA Section 112(j).

3. Updates to Definitions

As noted above, Staff are proposing to move certain definitions to their most appropriate locations within Regulation 2. Definitions of terms that are used in multiple places throughout the various rules in Regulation 2 should be located in Regulation 2, Rule 1, General Requirements (in Section 2-1-200 *et seq.*). These general definitions apply to all the specific rules in Regulation 2. Definitions of terms that are used only in specific rules within Regulation 2 should be located in the specific rule in which they are used. Definitions that are specific to Title V permitting under Regulation 2, Rule 6, for example, should be located in Regulation 2, Rule 6 (in Section 2-6-200 *et seq.*). The Proposed Amendments move several definitions to accomplish this end.

In particular, there are three specific definitions in Regulation 2, Rule 6, which more appropriately belong in Regulation 2, Rule 1, because they are general definitions applicable to all of the rules in Regulation 2. These are (1) Section 2-6-206, the definition of "Facility"; (2) Section 2-6-207, the definition of "Federally Enforceable"; and (3) Section 2-6-218, the definition of "Potential to Emit". The Proposed Amendments establish the definitions for these terms in Regulation 2, Rule 1, and retain appropriate cross-references in the definitional sections in Regulation 2, Rule 6 to help readers locate the definitions.

The Proposed Amendments also add new definitions for Greenhouse Gases (GHGs) and CO_2e as part of the implementation of Title V permitting for GHGs. These definitions, in proposed new sections 2-6-245 and 2-6-246, are discussed above in connection with incorporating GHGs into the Title V program. The Proposed Amendments similarly add a new definition of "Maximum Achievable Control Technology" to help implement the "case-by-case MACT" requirement as also discussed above.

Finally, the Proposed Amendments also clarify in the definition of "Regulated Air Pollutant" in Section 2-6-222 that total suspended particulate is not treated as a separate regulated air pollutant in its own right. Particulate matter is regulated under the Title V program as PM_{10} and $PM_{2.5}$, not as total

suspended particulate matter. This clarification implements EPA's policy for addressing total suspended particulate matter in the context of Title V permitting.[124]

E. Effective Date of Proposed Amendments and Transitioning to New Regulatory Requirements

District Staff intend to propose that the Board of Directors adopt the Proposed Amendments to become effective as of the date that EPA approves the Proposed Amendments into the California State Implementation Plan. Basing the effectiveness of the Proposed Amendments on the date of EPA approval is important to ensure that there is only a single set of regulatory requirements that will apply for all purposes.

Under California law, District regulations are effective as soon as the Board of Directors makes them so (i.e., the Board's designated effective date). For purposes of implementing the Clean Air Act's federal requirements, however, District regulations do not become effective until they are approved by EPA. Thus if the Proposed Amendments become effective immediately upon adoption, it will create a "gap" between the version of the regulations that is effective under state law and the version that is effective for federal purposes during the period between Board adoption and EPA approval. That is, the revised version contained in the Proposed Amendments will be effective under State law, and regulated facilities will be required follow that version under the Health and Safety Code; but the prior EPA-approved version will still be in effect for federal purposes, and regulated facilities will have to follow that version under the Clean Air Act.

This "SIP gap" scenario would generate an inordinate amount of complexity and confusion for all involved. To avoid the "SIP gap", District Staff will propose that the Board establish the effective date of the Proposed Amendments to coincide with the date of EPA's approval. Other California air districts have successfully used this approach, and it will greatly simplify the transition to the new requirements in the Bay Area. Under this approach, the current version of the regulations will continue in effect after the Board of Directors approves the Proposed Amendments, up until such time as EPA has had the chance to review and approve them. At that point, when EPA approves the Proposed Amendments as effective for federal purposes, the revised version will take effect and establish a single common set of legal requirements that are effective for all purposes under state and federal law.[125]

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[124] *See* Memorandum from L. Wegman, Deputy Director, EPA Office of Air Quality Planning & Standards, to EPA Regional Directors, re "Definition of Regulated Pollutants for Particulate Matter for Purposes of Title V" (Oct. 16, 1995), available at www.epa.gov/ttn/oarpg/t5/memoranda/pmregdef.pdf.

[125] Note that under Section 2-1-409, permit applications are processed according to the regulations that are in effect as of the date of the complete application. Thus, complete applications that are submitted before the effective date of the Proposed Amendments will be processed under the current version of the regulations, not the revised version. For any activities at regulated facilities that do not require a permit, the version of the regulations that applies is the version in effect at the time the activity takes place. For example, if construction of a particular source or modification is subject to an exemption and does not require a permit, the version of the exemption that applies is the one in effect at the time the construction takes place.

The one exception that District Staff will suggest for Board of Directors approval concerns the updates to the emissions banking procedures in Regulation 2, Rule 4. These updates are discussed in Section IV.C. above, and they will establish procedures for determining the $PM_{2.5}$ fraction of existing PM_{10} banked credits and the condensable PM emissions associated with such credits. As explained in Section IV.C., it is more appropriate for these amendments to take effect immediately upon adoption by the Board of Directors so that holders of existing banked PM_{10} credits can begin the conversion process and establish with certainty the amount of credits that they are eligible for. Moreover, there is no "SIP gap" downside to having these revisions take effect immediately, because these are essentially all new provisions that are being added to Rule 4. There are no existing requirements that would be in place during the "gap" that could result in potentially conflicting or confusing regulatory requirements during EPA's review period. For these reasons, it is more appropriate for the revisions to the emissions banking procedures in Regulation 2, Rule 4 to take effect immediately upon approval by the Board of Directors.

Accordingly, District Staff intend to propose that the Board of Directors adopt the Proposed Amendments to Rules 1, 2 and 6 of Regulation 2 with an effective date as of the date that EPA approves them into the California State Implementation Plan. Staff further intend to proposed that the Board of Directors adopt the Proposed Amendments to Rule 4 of Regulation 2 effective immediately upon adoption. District Staff will prepare language for a Resolution for the Board of Directors to consider consistent with this approach.

Finally, as an additional effort to help transition to the new provisions included in the Proposed Amendments, District Staff intend to develop a comprehensive update to the District's Permit Handbook.[126] District Staff have developed the Proposed Amendments after a thorough review of how the District's permitting programs currently work, as well as how they can be improved. This review has resulted in the reorganization, clarification, and streamlining of the regulatory provisions in Regulation 2 described above. District Staff intend to follow up on this review of the District's permitting regulations with a similar review of the provisions of the Permit Handbook that explain how these regulations work. This review will also include an update to address the new and revised provisions in Regulation 2 that are being made through the Proposed Amendments. District Staff intend to develop these revisions to the Permit Handbook during the post-adoption period when EPA is reviewing the Proposed Amendments for inclusion in the SIP. That way, the revised Permit Handbook can be finished and available for use by the time EPA completes its review and the Proposed Amendments become effective. District Staff will work with the regulated community and other interested parties in developing these revisions to the Permit Handbook to ensure that the procedures address in it will be efficient and workable for all involved. As always, District Staff will remain available to provide additional guidance, information, and direction to regulated entities and others in understanding how the Proposed Amendments will apply in individual permitting situations.

[126] The District's current Permit Handbook can be found on the District's website at: http://hank.baaqmd.gov/pmt/handbook/rev02/permit_handbook.htm.

V. REGULATORY ANALYSES

Adoption and amendment of District regulations is subject to certain statutory requirements as addressed below.

A. Environmental Impact Report Prepared under the California Environmental Quality Act

The Proposed Amendments have been prepared to help the Air District implement important Clean Air Act permitting programs, which will help ensure that District regulations are complied with, air pollution is reduced, and the region's clean air goals are achieved. The Proposed Amendments will undoubtedly have overall positive environmental benefits. The District also received comments suggesting that the Proposed Amendments could have the potential to result in significant ancillary adverse environmental impacts in certain areas. In order to evaluate whether there could be any such significant adverse impacts, District Staff have prepared (through an environmental consultant) an Environmental Impact Report (EIR) in accordance with the requirements of the California Environmental Quality Act (CEQA). The District and its consultant have followed all applicable requirements of CEQA through this process, and have prepared a draft EIR at this time for public review and consideration. The District is publishing this draft EIR in connection with this Staff Report and the Proposed Amendments. The District will consider comments received on the draft EIR and will prepare a Final EIR, as appropriate, for consideration and certification by the Board of Directors. The EIR has evaluated the potential for environmental impacts from the Proposed Amendments and has found that there will not be any significant environmental impacts from this project. District Staff invite interested members of the public to review and comment on this EIR.

B. Findings and Assessments Under Health & Safety Code Sections 40727 and 40728.5

Before adopting or amending any regulations, the Board of Directors must make certain findings required by Health & Safety Code Section 40727. These include findings of necessity, authority, clarity, consistency, non-duplication, and reference. District Staff have conducted an analysis of the Proposed Amendments and have concluded that there is substantial evidence on which the Board of Directors can make these required findings. The basis for this conclusion is as follows.

- **Necessity:** This finding requires a demonstration that a need exists for the proposed amendments, as demonstrated by the record. As discussed above in Section III, the Proposed Amendments are necessary to address a number of recent regulatory and technical developments concerning the NSR and Title V programs. Several of these recent developments are requirements that the District must address to obtain EPA approval of its regulatory programs. California will face sanctions if the District fails to satisfy these requirements. Certain other of these recent developments concern effective implementation of the District's permitting program. Effective implementation requires that the Proposed Amendments be adopted to address these areas.

- **Authority:** This finding requires identification of the state or federal law that permits or requires the District to adopt the Proposed Amendments. The federal law that requires the District to adopt NSR permitting regulations is in Part C and Part D of Title I of the Clean Air Act. The federal law that requires the District to adopt Title V permitting regulations is Title V of the Clean Air Act. The California law that requires the District to adopt permitting requirements to provide for attainment of ambient air quality standards is Division 26, Part 2, Chapter 10 of the California Health & Safety Code (commending with Section 40910). Additional California law authorizing the District to adopt NSR and Title V permitting regulations is contained in Sections 40001 and 40702 of the California Health & Safety Code, which are general provisions authorizing air districts to adopt and implement appropriate regulations as necessary to achieve and maintain air quality standards and to execute the powers and duties granted to and imposed on them.
- **Clarity:** This finding requires that the Proposed Amendments are written so that the regulation's meaning can be easily understood by persons affected by it. As explained in this Staff Report, District Staff have conducted a thorough review of the regulatory language contained in the Proposed Amendments to ensure that it presents the requirements of the NSR and Title V permitting programs in the clearest possible manner. District Staff have also conducted a public outreach process and engaged with members of the public who will be affected by the regulations to solicit their input on how the regulations should be written and presented.
- **Consistency:** This finding requires that the Proposed Amendments must be in harmony with, and not in conflict with or contradictory to, existing statutes, regulations, and decisional law. As explained in this Staff Report, District Staff have reviewed all relevant provisions of state and federal law, and court decisions to the extent applicable, to ensure that the Proposed Amendments are consistent with them. A primary purpose of the Proposed Amendments is to address certain inconsistencies and ensure that the District's programs are in fact consistent with applicable legal requirements.
- **Non-Duplication:** This finding requires that the Proposed Amendments must not impose the same requirements as an existing state or federal regulation, unless they are necessary and proper to execute powers and duties granted to or imposed upon the District. To the extent that the District's NSR and Title V programs require stationary sources to obtain pre-construction and operating permits in the same manner as EPA's federal programs, the District's permitting programs are necessary and proper to execute the District's power and duty to implement these requirements in the Bay Area. As discussed above in Section II.B. on the legal framework for NSR and Title V permitting, although Federal law creates these programs and sets forth the minimum requirements for how they are implemented (with additional requirements imposed by State law), the programs are intended primarily to be implemented by local agencies through their own regulations. The Proposed Amendments will allow the District's permitting programs to do so effectively and in accordance with law.

- **Reference:** This finding requires identification of and reference to the provisions of law that will be implemented by the Proposed Amendments. These provisions are those identified and referred to in connection with the "authority" finding above.

Based on the foregoing, evidence exists on which the Board of Directors can make the findings required by Health & Safety Code Section 40727.

In complying with these requirements of Health & Safety Code Section 40727, the District is required under Health & Safety Code Section 40727.2 to prepare an analysis identifying all existing federal air pollution control requirements and District rules and regulations that apply to the types of sources and equipment that are subject to the Proposed Amendments. As the NSR and Title V permitting programs apply to essentially all regulated stationary sources of air pollution in the Bay Area, the universe of existing federal and District pollution control requirements and rules and regulations that apply to the facilities that may be affected by the Proposed Amendments includes all federal requirements for stationary sources and all District requirements. These requirements are numerous, and they are listed in Title 40 of the Code of Federal Regulations, Chapter 1, Subchapter C (Air Programs); and in District Regulations 1 through 12.

In addition, under Health & Safety Code Section 40728, before adopting or amending any regulations that will significantly affect air quality or emissions limitations, the District must assess any potential socioeconomic impacts from the adoption or amendment, to the extent that data are available. This requirement is not strictly applicable to the Proposed Amendments, because they involve permitting programs in Regulation 2, and not the air quality emissions limitations that the Air District adopts to impose specific emissions limits on particular categories of sources in the District's other rules. Regardless of whether such an analysis is technically required by statute, however, Air District staff have considered the cost impacts and other factors addressed under Section 40728 because they are important considerations in how the District should implement its permitting programs. These considerations also satisfy the requirements of and intent behind Section 40728, to the extent that the Section is applicable in this situation. Consideration of these factors supports the conclusion that there will be no significant adverse socioeconomic impacts from the Proposed Amendments. Section 40728 defines socioeconomic impacts to include the following elements:

- Businesses Affected: NSR and Title V permitting address a wide variety of stationary sources in the Bay Area, and these programs could potentially affect any business in the region. The District currently has approximately 8,000 permitted facilities, and the Proposed Amendments could potentially affect any or all of them. Many aspects of the NSR and Title V permitting programs are not being changed, of course, and so many of these facilities will not see any change in the specific provisions that apply to them. Moreover, many aspects of these permitting programs apply to new and modified sources, and so how any particular business may be affected will depend upon its plans for adding new sources or modifying its existing sources in the future. As such, it not possible to determine with any greater specificity how the Proposed Amendments will affect any particular operation or any particular type of business or

segment of industry. There are no data available to make such a determination at that level of specificity.

- Impact on Employment and the Economy: For the same reasons that it is not possible to state with specificity exactly what businesses will be affected by the Proposed Amendments or exactly how any particular business or industry segment will be affected, it is not possible to quantify with specificity the extent of any potential impacts on employment and the economy. It is clear that any such impacts would be minimal, however, if there are any impacts at all. The Proposed Amendments do not create any substantial new emissions control requirements that sources are not subject to already, or specify any specific emissions limitations that will require sources to install or substantially modify pollution control equipment in any significant manner. Where the Proposed Amendments do add new requirements, these are not expected to require affected facilities to have to hire any additional staff or to impose costs that will have any appreciable adverse impact on the region's economy. As analyzed in the draft EIR prepared for this project, the additional substantive provisions being added in Regulation 2 will not require regulated facilities to add any significant additional pollution control equipment or conduct their operations in any significantly different manner, compared to what they would be required to do anyway under existing regulatory conditions. Moreover, adopting the Proposed Amendments will allow the Air District to retain EPA approval of its NSR and Title V permitting programs, which will have significant benefits in having the District remain as the permitting agency for these programs (instead of having EPA implement them under its federal authority), and in avoiding sanctions that would be imposed on the Bay Area if it were to fail to have EPA-approved programs (e.g., loss of federal highway funds). To the extent that the Proposed Amendments will have any net impact on employment and the economy in the Bay Area, it is therefore expected to be positive. There are not expected to be any significant adverse impacts on employment and the economy.

- Range of Probable Costs of Regulation: As noted above, the additional substantive provisions being added in Regulation 2 will not require regulated facilities to add any significant additional pollution control equipment or conduct their operations in any significantly different manner. The types of pollution control equipment that may be needed to address new requirements being added under the Proposed Amendments will most likely already be required to address existing regulatory requirements. For example, although new requirements for $PM_{2.5}$ are being added, it is likely that sources subject to this requirement will already be required to implement control devices for PM_{10} under current District regulations and/or to address $PM_{2.5}$ under federal requirements. It is not possible to state with specificity exactly what will be required at each facility that may be subject to the Proposed Amendments, as data are not available on what each individual facility may do in the future to become subject to these requirements. The only conclusion that can readily be drawn based on existing data is that the costs of complying with the new requirements being added in the Proposed Amendments are likely to be minor.

  Air District Staff reviewed the Proposed Amendments to identify any new or additional requirements that may impose additional costs (compared to the current regulatory baseline)

that can be identified with specificity. The one area in which the proposed amendments will impose a new requirement with a quantifiable additional specific cost is the NAAQS protection requirement modeling requirement in proposed Section 2-2-308. This provision will expand the air quality impact analysis modeling requirement that currently applies for permit applicants that trigger PSD requirements, and will apply it to certain additional applications that involve significant net emissions increases. (See Section IV.B.3.a. for further detail on this requirement.) For permit applicants that become subject to this requirement under Section 2-2-308 (i.e., for projects with significant net emissions increases that are not currently subject to any modeling requirements already), they will be required to conduct a computer modeling analysis of their emission. The cost for conducting such modeling varies depending on the complexity of the project being modeled and whether a screening-level analysis will suffice or whether a more detailed analysis is required, but it is generally in the range of approximately $5,000 for a simple scenario to up to $60,000 to $70,000 for a more complex case.

District Staff reviewed the number of additional permit applications that will be subject to this requirement to estimate an overall cost to the regulated community in order to ensure that such projects do not cause or contribute to a violation of the NAAQS under proposed Section 2-2-308. Staff reviewed data on all of the permit applications that the District has received back to 2000 to see how many had significant net emissions increases that would require modeling under proposed Section 2-2-308 that were not already subject to existing modeling requirements. Over the past 12+ years, the District's database lists 36 such applications, or approximately 3 per year on average.[127] Moreover, for all but two of them the pollutant involved was particulate matter. Requiring modeling of significant PM emissions increases is especially important given the fact that the Bay Area is designated as non-attainment for $PM_{2.5}$. The relatively modest additional cost involved is more than justified in these instances to ensure that the PM emissions increases from such projects does not result in any additional $PM_{2.5}$ NAAQS exceedances.

- Availability of Cost-Effective Alternatives: There are no alternatives that will satisfy the legal requirements and policy goals of the Proposed Amendments with less cost. The District is required to adopt these updates to its NSR and Title V programs to satisfy its obligations under the Clean Air Act. The Proposed Amendments are implementing these requirements in a manner that will minimize the costs of compliance, and there are no alternatives that would do so at less cost. Staff reviewed several policy alternatives that were suggested by members of the public during the rule development process and the reasons why they were not chosen as the preferred alternative in Chapter 4 of the Draft EIR. To the extent that there are alternatives to the Proposed Amendments that satisfy the minimum legal requirements under state and federal law, these were not found to be preferable alternatives because they were not practicable in terms of ensuring flexibility and enforceability in these programs.

[127] See Spreadsheet, GAS Emissions Increases for 2-2 Analysis, prepared by G. Stone and D. Brunelle, BAAQMD, August 2012.

- Emission Reductions: It is difficult to quantify the emission reductions that will be gained specifically through the Proposed Amendments, because these permitting programs do not establish emissions limitations or emissions reduction requirements directly. Rather, they create permitting programs and then leave it up to the permit application and review process for each individual facility to determine what regulatory requirements apply at each facility and what they will require in terms of emission reductions. The Proposed Amendments will help implement these permitting programs effectively, however, and are therefore vital to ensuring that the District can achieve the clean air goals of its regulatory programs. The Proposed Amendments therefore play an important role in achieving the emission reductions from all of the District's regulations.
- Necessity: As noted above in connection with Section 40727, the Proposed Amendments are necessary to implement recent regulatory developments. These developments are summarized in Section III of this Staff Report.

Section 40728 requires the Board of Directors to consider the socioeconomic impact of the Proposed Amendments, and to make a good faith effort to minimize any adverse socioeconomic impacts associated with them. In light of the discussion above, District Staff have concluded that the Proposed Amendments will not have any significant adverse socioeconomic impacts. Staff submit that adoption of the Proposed Amendments will be an effective way to implement state and federal NSR and Title V permitting requirements with the minimum amount of socioeconomic impact possible consistent with achieving these programs' important clean air goals.

VI. Rule Development Process and Input from Interested Members of the Public

The Proposed Amendments are the product of over a year of work by District Staff with input from a large number of interested stakeholders, including EPA Region IX and ARB staff, representatives from the regulated community and industry groups, representatives from environmental and advocacy organizations, and interested members of the public. Engagement and participation by these stakeholders has resulted in significant improvements to the Proposed Amendments as they have evolved during this process.

District Staff began this process in 2011 with a review of the District's current NSR and Title V permitting programs and the recent regulatory developments affecting them. This internal review led to the development of a number of rule development concepts, and subsequently to the development of an initial concept draft of proposed amendments for internal consideration. District Staff also shared this preliminary work with staff of EPA Region IX and ARB to get their initial impressions and feedback on District Staff's proposed approach. District Staff met with staff of these agencies on October 4, 2011, to discuss the proposed amendments.

Based on this preliminary work, District Staff developed a first draft of the proposed amendments and published it in January of 2012 for consideration and comment by interested members of the public. The first draft of the proposal was also accompanied by a summary of each regulatory provision affected and a Staff Report explaining the reasoning behind the proposed revisions.

District Staff presented a briefing to the Stationary Source Committee of the District's Board of Directors on January 9, 2012, just after the release of the first draft of the proposed amendments. District Staff presented the Stationary Source Committee with an overview of the NSR and Title V permitting programs, a summary of the recent developments that have necessitated this update project, a discussion of what the proposed amendments involve, and an outline of the remaining rule development process including upcoming public participation opportunities.

District Staff then held a public workshop on February 22, 2012, to introduce the proposed amendments to the public, explain the purposes and goals of the amendments, answer questions, and obtain feedback. This public workshop was webcast and it was attended by approximately 80 people. District Staff requested written comments on the first draft by March 2, 2012, and received 7 comment letters.

Several attendees at the public workshop requested that District Staff convene a technical working group to discuss the specific language in the proposed amendments in more detail. These attendees wanted to discuss specific regulatory language in greater detail than was possible at the public workshop. In response, District Staff convened a technical working group and held approximately 10 hours of further public meetings to discuss these specific issues on February 28, 2012, and March 8 and 20, 2012. To allow further time to address these issues in writing, District Staff extended the public comment period on the first draft of the proposed amendments until March 27, 2012, and received 8 additional comment letters.

District Staff also attended a conference organized by the Golden West Section of the Air & Waste Management Association specifically to discuss the proposed amendments. This conference was held on April 5, 2012, and was attended by a number of District Staff as well as representatives from industry, environmental organizations, ARB, and EPA Region IX.

Based on the public input and feedback received on the first draft of the proposed amendments, District Staff revised the proposed amendments and issued a second draft on May 25, 2012. District Staff also published a Background Discussion document to explain how they were changing the proposal from the first draft and the reasons why. This document also included responses to all of the comments that had been received on the first draft. District Staff then held a further public meeting of the technical working group on June 7, 2012, to discuss the revisions made in second draft, answer any questions, and receive input and feedback from the public. District Staff also solicited further written comment on the second draft and received an additional 4 comment letters.

District Staff also engaged members of the public with respect to the preparation of the CEQA Environmental Impact Report (EIR) for this project. District Staff published a Notice of Preparation and Initial Study and requested written comment on it. District Staff also held a CEQA scoping meeting on July 10, 2012, to discuss the scope of the EIR and the environmental issues to be evaluated in it. Approximately 8 members of the public attended the scoping meeting.

District Staff also made themselves available throughout the process by phone and in person to answer questions, explain issues, and receive input from members of the public. District staff have had a large number of communications – by telephone, by email and in person – with interested members of the public during this process.

District Staff also maintained a web page for this rule development project on the District's website in order to provide a central location at which interested members of the public could access information and documents related to the project. The web page is located at www.baaqmd.gov/Divisions/Engineering/Proposed-Reg-2-Changes.aspx, and it provides a useful archive of the principal public documents related to this rule development project, including the early drafts of the Proposed Amendments, the background documents published in connection with those drafts, presentation materials from the public meetings and workshops that were held, and the comments received from members of the public and Staff's responses.

District Staff have relied on all of the public input, feedback, and comment that was received during this rule development process to develop the final version of the Proposed Amendments. Many of the commenters provided helpful insights, and their comments have helped improve the Proposed Amendments significantly. District Staff would like to thank all those who took the time to review Staff's initial drafts and provide feedback.

VII. CONCLUSION

For the reasons discussed in the foregoing Staff Report, District Staff recommend that the Board of Directors adopt the Proposed Amendments. The Proposed Amendments have met all applicable legal requirements for adopting amendments to District regulations, including substantive and procedural requirements. The Proposed Amendments have also been developed in coordination with interested stakeholders and have incorporated helpful comments received from members of the public. The Proposed Amendments will strengthen the District's NSR and Title V permitting programs and ensure that they can be implemented consistently and efficiently. The Proposed Amendments will update Regulation 2, Rules 1, 2, 4 & 6 so that EPA can approve them and allow the District to continue to implement these important permitting programs under the Clean Air Act.

District Staff respectfully submit that the Board of Directors should exercise the legal authority granted to it by legislature of the State of California under the Health and Safety Code and the adopt the Proposed Amendments as the policy and regulations of the Bay Area Air Quality Management District.