SAN JOAQUIN VALLEY UNIFIED AIR POLLUTION CONTROL DISTRICT

DRAFT STAFF REPORT

Proposed Amendments to Rule 2201 (New and Modified Stationary Source Review Rule)

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I. SUMMARY

The San Joaquin Valley Air Pollution Control District (District) is proposing to amend District Rule 2201 (New and Modified New Source Review (NSR) Rule) to address the District's reclassification from Moderate to Serious nonattainment for the 1997 and 2006 National Ambient Air Quality Standards (NAAQS, or standards) for particulate matter with an aerodynamic diameter of less than 2.5 microns (PM2.5).

To comply with federal requirements for Serious nonattainment areas, the District is proposing to amend District Rule 2201 to lower the PM2.5 Major Source Emission Threshold from 100 tons per year to 70 tons per year. In addition, the District will address Clean Air Act Section 189(e) precursor requirements for major stationary sources of PM2.5.

Further, the District is proposing to amend District Rule 2201 to clarify in the definition of PM2.5 that PM2.5 includes the condensable portion of particulate pollution.

In addition, the District is taking this opportunity to add certain types of Temporary Replacement Emissions Units (TREUs) to the application shield provisions of District Rule 2201, Section 8.

Also, the reference to the offset thresholds for carbon monoxide (CO) – non-attainment areas in Section 4.5.3, Table 4-1 will be removed, as there are no non-attainment areas in the Valley.

II. DESCRIPTION OF RULE 2201 (NEW AND MODIFIED STATIONARY SOURCE REVIEW RULE)

The District's NSR Rule provides a regulatory mechanism for allowing continued economic growth while minimizing the amount of emission increases due to this growth. District Rule 2201 applies to all new stationary sources and all modifications to existing stationary sources that are subject to District permit requirements. For smaller sources of emissions, there are certain permitting exemptions identified in District Rule 2201 and District Rule 2020 (Exemptions).

The District's NSR program is designed to meet both the state and federal NSR requirements for nonattainment areas and applies to new and modified stationary sources that emit nitrogen oxides (NOx), volatile organic compounds (VOC), particulate matter with an aerodynamic diameter of less than 10 microns (PM10), PM2.5, sulfur oxides (SOx), CO, and other pollutants subject to District permitting requirements pursuant to District Rule 2010 (Permits Required).

Key features of Rule 2201 include:

- Best Available Control Technology (BACT): mandates emission controls to minimize emission increases above de minimis values;
- Emission offsets: requires emissions above specified offset threshold levels to be mitigated with either concurrent reductions or past reductions which have been banked as emission reduction credits (ERC);
- Public notification: a 30 or 45 day notice period prior to issuance of an Authority to Construct (ATC) to garner comments on projects that result in emissions above specified levels;
- Required elements for Authority to Construct, Permit to Operate and administrative requirements for the processing of NSR applications.

III. BACKGROUND AND DISCUSSION OF PROPOSED RULE AMENDMENTS

A. Major Source and Federal Major Modification Thresholds

Major Source and Federal Major Modification are for federal nonattainment new source review (NSR), which is applicable to pollutants for which the District is classified as nonattainment of the corresponding NAAQS.

The federal NSR permitting program relies on emissions thresholds to determine when requirements apply to new stationary sources and to modifications of existing stationary sources. If a new or modified facility will emit target air pollutants in

amounts greater than the major source emission threshold, the facility is considered a major source. If emissions increases of target air pollutants from a new facility or modified facility are greater than the federal major modification significance threshold, the increase is considered significant and the project will be a major modification pursuant to 40 CFR Part 51.165.

Sources are defined as a major source for nonattainment NSR provisions if they have a potential to emit 70 or more tons per year of PM2.5 in a Serious nonattainment area. Increases in PM2.5 emissions are considered significant if they exceed 20,000 pounds per year of direct PM2.5 emissions or, for those precursors found to be significant, if they exceed 80,000 pounds per year.

Currently, District Rule 2201 has a PM2.5 major source threshold of 200,000 pounds per year (100 tons per year), and this proposed amendment will lower this threshold to 140,000 pounds per year (70 tons per year) due to the District's classification as a Serious nonattainment area for PM2.5. District Rule 2201 also lists NOx and SOx as significant precursors to PM2.5. The current rule lists a federal major modification threshold of zero pounds per year for NOx, as it is also a significant precursor to ozone, and 80,000 pounds per year for SOx. As these thresholds meet requirements for serious PM2.5 non-attainment areas, they will not be changed, as detailed further below.

B. PM2.5 Precursors

Ambient PM2.5 is comprised of many different constituents, and as a result, there are multiple precursor pollutants, such as NOx, SOx, VOC and ammonia, that may lead to PM2.5 formation. Pursuant to the federal Clean Air Act (CAA) Section 189(e), control requirements applicable to major sources of PM2.5 must also apply to major sources of PM2.5 precursors, except where such sources do not contribute significantly to PM2.5 levels that exceed the standard in the area. As required by Subpart 4 of the CAA, all precursors are presumed to be significant, unless demonstrated they are not. An evaluation of the four precursors is below:

1. NOx and SOx Contribution to PM2.5 Concentrations

District Rule 2201 currently lists NOx and SOx as significant precursors to PM2.5 with a federal major modification threshold of 80,000 pounds per year, and no changes for these pollutants are proposed.

2. Ammonia Contribution to PM2.5 Concentrations

In the Valley, there is extensive scientific research and technical analysis demonstrating that ammonia reductions do not contribute significantly to PM2.5

attainment. As detailed in Chapter 4 of the *2012 PM2.5 Plan*[1] and Chapter 2 of the 2015 Plan for the 1997 PM2.5 Standard (*2015 PM2.5 Plan*)[2], ammonium nitrate is the predominant secondary PM2.5 species, and is formed from nitric acid and ammonia. The plans go on to demonstrate that there is a relative abundance of ammonia compared to nitric acid, and that nitric acid (i.e. NOx) is the limiting factor in forming ammonium nitrate.

Due to this extensive body of science that clearly shows that reducing NOx emissions is very effective in reducing PM2.5 values, while reducing ammonia emissions is not effective, ammonia reductions have not historically been considered a significant precursor to PM2.5 formation in the Valley.

a. Major Source Contribution

There are only a few major stationary sources of ammonia emissions in the Valley, and the ammonia major stationary sources contribute only a small portion of the total ammonia inventory from all sources in the Valley (including stationary and mobile sources). Ammonia major sources include power plants with Selective Catalytic Reduction (SCR) systems, which rely on the use of ammonia as a reagent for the control system, and a few agricultural operations (one large dairy and 4 large poultry operations). The following table compares the major source ammonia emissions from the District's 2014 emissions inventory to the total inventory of ammonia emissions within the San Joaquin Valley[3].

Major Source Emission Contribution			
Pollutant	Total Inventory (tons/day)	Major Source Inventory (tons/day)	**Major Source Contribution**
Ammonia	334.2	2.32	**0.69%**

As shown in the preceding table, ammonia emissions from ammonia major sources are just 0.7% of the total ammonia inventory in the Valley. As such, existing major stationary sources of ammonia emissions do not contribute significantly to PM2.5 levels that exceed the 1997 and 2006 NAAQS in the San Joaquin Valley.

b. Minimizing Growth in Stationary Source Ammonia Emissions

As the existing major sources of ammonia represent a very small fraction of the Valley's total ammonia inventory, any future growth in major source ammonia

[1] http://www.valleyair.org/Air_Quality_Plans/PM25Plan2012/CompletedPlanbookmarked.pdf
[2] http://www.valleyair.org/Air_Quality_Plans/docs/PM25-2015/2015-PM2.5-Plan_Bookmarked.pdf
[3] CEPAM San Joaquin Valley 2015 MSM PM2.5 SIP Planning Inventory v.1.01

emissions will also be a small part of the overall growth in the inventory. As shown in Appendix B of the *2015 PM2.5 Plan*, the expected growth in ammonia emissions from all sources in the Valley from 2014 to 2020 is 21.8 tons per day. As the major sources of ammonia comprise 0.69% of the total inventory, their contribution to the growth would only be 0.15 tons per day by 2020, an insignificant portion of the projected inventory of over 350 tons per day in 2020.

Additionally, Rule 2201 does provide for the regulation of ammonia through the District's BACT requirements. Any new and modified ammonia sources in the Valley require BACT if increases in daily emissions exceed 2 pounds. District BACT is equivalent to federal Lowest Achievable Emission Rate (LAER), which is more stringent than federal BACT. Under federal NSR, ammonia as a precursor would not be regulated unless the increase was at least 40 tons per year. Therefore, District Rule 2201 currently controls ammonia growth at levels far below the federal NSR threshold. As such, new and modified major stationary sources of ammonia emissions will not contribute significantly to PM2.5 levels that exceed the 1997 and 2006 NAAQS in the San Joaquin Valley.

c. Sensitivity Analysis of Ammonia Contribution to PM2.5 Concentration

A sensitivity analysis was conducted as part of the *2012 PM2.5 Plan*, to evaluate the effectiveness of reducing PM2.5 precursors, including ammonia, compared to reducing direct PM2.5 emissions. As the District's major sources of ammonia are spread throughout the Valley, the valley-wide modeling sensitivity analysis conducted for the *2012 PM2.5 Plan* is appropriate. Of the PM2.5 monitoring sites in the Valley, the Bakersfield-California site has the highest PM2.5 design value, and will be the last site to reach attainment of the PM2.5 NAAQS: as this is the worst site, it will be used as the basis of this analysis.

As detailed in Appendix G of the *2012 PM2.5 Plan*, reductions in ammonia emissions achieve insignificant reductions in the 2019 PM2.5 design values:

- A 1 ton per day reduction in the Valley's total direct PM2.5 emissions reduces the Bakersfield-California PM2.5 design value by 0.34 $\mu g/m^3$
- A 1 ton per day reduction in the Valley's total NOx emissions reduces the Bakersfield-California PM2.5 design value by 0.08 $\mu g/m^3$
- A 1 ton per day reduction in the Valley's total ammonia emissions reduces the Bakersfield-California PM2.5 design value by a mere 0.008 $\mu g/m^3$

Relative to the other pollutants, ammonia emission reductions at the Bakersfield-California site are only 2.3% as effective as directly emitted PM2.5

emission reductions, and only 10% as effective as NOx emission reductions. It would take an unreasonable tonnage of ammonia reductions to reduce a significant amount of PM2.5 mass. If all ammonia emissions from all major ammonia sources in the Valley were completely eliminated (2.32 tons per day), this would only reduce the PM2.5 design value by 0.019 μg/m^3.

While the District believes this Valley-wide sensitivity analysis is the appropriate approach, some may argue for an analysis of the effects of reducing PM2.5 and precursor emissions in the areas with the highest monitored PM2.5 levels, historically the Bakersfield-California site. Therefore, a similar sensitivity analysis was focused on the effect that localized reductions would have on the Bakersfield-California site. The following were the findings of that analysis:

- A 1 ton per day reduction in Kern County's total direct PM2.5 emissions reduces the Bakersfield-California PM2.5 design value by 1 μg/m^3
- A 1 ton per day reduction in Kern County's total NOx emissions reduces the Bakersfield-California PM2.5 design value by 0.12 μg/m^3
- A 1 ton per day reduction in Kern County's total ammonia emissions reduces the Bakersfield-California PM2.5 design value by only 0.02 μg/m^3

Only six of the 17 ammonia major sources in the Valley are located in Kern County, representing 0.775 tons per day of emissions. If the ammonia emissions from these six sources were completely eliminated, the PM2.5 design value would decrease by only 0.0155 μg/m^3, even less than the reduction of 0.019 μg/m^3 achieved by completely eliminating all major ammonia source emissions in the entire Valley.

Thus, controlling major source ammonia emissions in the San Joaquin Valley does not significantly contribute to attainment of the 1997 and 2006 PM2.5 NAAQS.

As demonstrated above, ammonia emissions from major sources do not contribute significantly to PM2.5 nonattainment in the SJV. Therefore, ammonia need not be addressed as a precursor to PM2.5 in the District's NSR program.

3. VOC Contribution to PM2.5 Concentrations

In the Valley, there is extensive scientific research and technical analysis demonstrating that VOC reductions do not contribute to PM2.5 attainment. In both the *2012 PM2.5 Plan* and the *2015 PM2.5 Plan*, the District discusses the importance of NOx controls and demonstrates that NOx controls are the most effective approach to reduce PM2.5 nitrate concentrations in the Valley. Modeling

also shows that once NOx controls are taken into consideration, VOC emissions reductions produce essentially no benefit in reducing PM2.5 concentrations.

As such, the Valley's VOC emissions do not need to be reduced to address EPA's PM2.5 standard. In 80 FR 1826, January 13, 2015, EPA concurs with the conclusion that VOC emissions do not contribute significantly to the formation of PM2.5 as stated in their proposed approval of the District's 2012 PM2.5 plan to address the 2006 PM2.5 standard: "*Based on a review of the information provided by the District and other information available to EPA, we propose to determine that at this time VOC emissions do not contribute significantly to ambient PM2.5 levels…*"[4]

The role of VOCs in the Valley's PM2.5 concentrations is discussed in detail in Chapter 4 and Appendix F (Modeling Protocol) of the *2012 PM2.5 Plan*, and is summarized here.

For the *2012 PM2.5 Plan*, the effectiveness of reducing PM2.5 precursors, including VOCs, was compared to reducing direct PM2.5 emissions and was quantified using inter-pollutant equivalency ratios[5]. Sensitivity analysis was performed for 10% reductions of primary PM2.5 as well as for each precursor separately. The results of the modeling runs are plotted on isopleth diagrams (also referred to as carrying capacity diagrams). These carrying capacity diagrams show the level of emissions that the atmosphere can "carry" and still demonstrate attainment. The carrying capacity diagrams presented in Chapter 4 of the *2012 PM2.5 Plan* (Figures 4-15 through 4-24)[6] show that NOx and directly-emitted PM2.5 are the most effective precursors to reduce to improve 24-hour PM2.5 design values, while additional VOC reductions do not correspond to improvements in PM2.5 design values.

This modeling showed that once NOx controls are taken into consideration, VOC emission reductions produce essentially no benefit. In fact, in some instances, VOC emissions reductions may actually lead to an increase in PM2.5 nitrate formation. Nitrogen-containing molecules such as PAN can act as temporary sinks for NO_2. When VOCs are controlled, the reduced availability of certain radicals which are generated from VOCs reduces the amount of NO2 that is sequestered, thereby increasing the availability of NO_2 and enhancing ammonium nitrate formation[7].

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[4] *Approval and Promulgation of Implementation Plans; Designation of Areas for Air Quality Planning Purposes; California; San Joaquin Valley Moderate Area Plan and Reclassification as Serious Nonattainment for the 2006 PM2.5 NAAQS; Proposed Rule, 80 Federal Register 8. Pp. 1816-1846. (p. 1826) (2015, January 13).*

[5] *2012 PM2.5 Plan* Appendix F (Modeling Protocol), p 127. http://www.valleyair.org/Workshops/postings/2012/12-20-12PM25/FinalVersion/16%20Appendix%20F%20Modeling%20Protocol.pdf

[6] *2012 PM2.5 Plan* Chapter 4, p 4-31 through 4-40. http://www.valleyair.org/Workshops/postings/2012/12-20-12PM25/FinalVersion/04%20Chapter%204%20Sci%20Foundation%20and%20Modeling.pdf

[7] Meng, Z., Dabdub, D., and Seinfeld, J.H., 1997, Chemical Coupling Between Atmospheric Ozone and Particulate

Although VOC is not a significant contributor to PM2.5 in the Valley, Rule 2201 provides for the regulation of VOC as a precursor to ozone. The level to which major sources of VOC are controlled in the District's NSR rule is extensive, since the Valley is classified as an extreme nonattainment area for ozone. VOC sources in the Valley are major sources at 10 TPY, have an emission offset threshold of 10 TPY, have a distance offset ratio of 1.5 to 1, require BACT if daily emissions exceed 2 pounds, require public notification if emission increases exceed either 100 lb/day for new sources or 20,000 lb/year for modified sources, and have a significance threshold of zero for federal major modifications. Therefore, VOC as an ozone precursor is controlled through the District's NSR rule at levels much lower than if they would be controlled as a PM2.5 precursor.

As demonstrated above, VOC emissions from major sources do not contribute significantly to PM2.5 nonattainment in the SJV. Therefore, VOC need not be addressed as a precursor to PM2.5 in the District's NSR program.

C. PM2.5 Definition Pertaining to Condensable Particulates

PM2.5 is comprised of both filterable and condensable particulate matter. Filterable PM2.5 is either a solid or liquid and is generally stable in the atmosphere, while condensable PM2.5 is a vapor or gas at stack temperature, but at ambient conditions the matter condenses to liquid or solid.

In EPA's Clean Air Fine Particulate Implementation Rule (72 FR 20586, April 25, 2007) and Implementation of the New Source Review (NSR) Program for Particulate Matter Less Than 2.5 Micrometers (PM2.5) rule (73 FR 28321, May 16, 2008), EPA explicitly included condensable matter in their PM2.5 definition for purposes of federal NSR applicability, citing the Consolidated Emissions Reporting rule (67 FR 39602, June 10, 2002), where it was first included for PM2.5.

The District has historically included condensable particulate emissions in its definition of total particulate emissions, well ahead of federal and other states' efforts to address this issue, and PM2.5 condensable emissions are treated as a part of total PM2.5 emissions under the District's rules and are not excluded for the purposes of triggering any federal new source review requirements. Rule 2201 currently defines PM2.5 as "*particulate matter with an aerodynamic diameter smaller than or equal to a nominal 2.5 microns*," and Rule 1020 (Definitions) defines Particulate Matter as "*any material except uncombined water, which exists in a finely divided form as a liquid or solid at standard conditions*." Since condensable particulate matter is, by definition, matter which condenses to a particulate form at ambient conditions, the District sees no way to read its regulations other than to conclude that PM2.5 includes condensable PM2.5.

Matter, Science, 277, 116-119.

This has included establishing permit requirements for various emissions sources that include condensable particulates as part of total particulate emissions limitations and associated emissions testing requiring that condensable particulates be measured (including utilizing an EPA-approved modified test method ahead of EPA's official test method, Method 202)[8].

While the District is currently following federal regulations by accounting for the PM2.5 and PM10 condensable portions in its permitting process, the District will revise the definition for PM2.5 in Rule 2201 to clarify that condensable particulates are included.

D. Application Shield for Temporary Replacement Emissions Units

District Rule 2201 contains an application shield for routine replacements, as defined in the Rule (Section 3.35), to allow them to be installed without first applying for an Authority to Construct (ATC), provided the application is submitted to the District within 7 calendar days of completing the installation of the replacement and the source operates with no increased emissions or throughput and complies with other applicable requirements detailed in the Rule as discussed further below. A routine replacement is a permanent replacement of an existing emissions unit, so the application shield provides no benefit to situations where a unit is brought in to temporarily replace the main unit while the main unit is repaired. The result of this incongruity is that a temporary replacement faces tougher regulatory hurdles than a permanent replacement before installation. The District believes that temporary replacements should also benefit from this application shield and, if certain precautions are taken, no impact on air quality will result.

Currently, when a unit must be shut down for repair or maintenance and the source wants to use a Temporary Replacement Emissions Unit (TREU) in place of the shut down unit, they must first obtain an ATC before the TREU can be installed and utilized. It has been a longstanding frustration for sources in the Valley that these temporary operations that really need this shield are precluded from using it. While the District expedites issuance of TREU ATCs (with a commitment to issue the ATC within 7 days of the receipt of the complete application for a TREU), this doesn't allow the source to install a TREU as quickly as they can have it delivered to the site, as could a routine replacement. Because facilities are quite often relying on these temporary replacements to restart their business or operation, any delay can be devastating. To alleviate this frustration while still ensuring the requirements of District Rule 2201 are met and no negative impact on air quality is created, this proposed amendment would allow certain TREUs to enjoy the application shield of Section 8.

The table below captures the current routine replacement application shield requirements and demonstrates that the proposed TREU application shield requirements are equivalent.

[8] http://www.epa.gov/ttn/emc/methods/method202.html

For both types, there is no increase in emissions allowed compared to the replaced unit and there must not be a change in function. The application shield for TREUs is also limited by Section 8 to those with the same limitations on design capacity and Best Available Retrofit Control Technology (BARCT) applicability. In addition, TREUs utilizing this application shield cannot, due to their temporary nature, constitute a Reconstructed Source.

Routine Replacements and TREUs eligible for application shield	
Routine Replacements	TREUs
No increase in potential to emit - (3.35.1)	No increase in potential to emit - (3.41.1, 8.1.3.2)
Allowed increase in design capacity up to 10% with no increase in potential to emit or throughput - (3.35.2)	Allowed increase in design capacity up to 10% with no increase in potential to emit or throughput - (8.1.3.1, 8.1.3.2)
Replacement performs same function -(3.35.3)	Replacement performs same function - (3.41, 8.1.3.3)
Replacement will not constitute a Reconstructed Source (3.34) or Reconstruction (40 CFR 60.15) – (3.35.4)	As a temporary replacement, the original emissions unit will be put back into service; therefore the TREU is not a Reconstructed Source or Reconstruction – (3.41.3)
If entire unit replaced, replacement is addressed by BARCT rule or equipped with control device capable of 85% control – (3.35.5)	Temporary replacement must be addressed by BARCT rule or equipped with control device capable of 85% control – (8.1.3.4)

Please note that the District is taking this opportunity to also clarify Section 8.1.1 to make it consistent with rule intent and District past practice. Since this section provides a pre-construction permit shield, the application is due within 7 calendar days of completing the construction or installation of the replacement unit.

E. CO Non-attainment Area Offset Threshold

Prior to 1998, some areas of the Valley were not in attainment for the Federal CO NAAQS, while the rest of the Valley was in attainment. As a result of this situation, early versions of Rule 2201 listed two different offset thresholds for CO emissions: 30,000 pounds per year for non-attainment areas and 200,000 pounds per year for attainment areas. Since 1998, all areas of the District have been classified as attainment for the CO NAAQS[9]. Therefore, for the past 17 years the non-attainment area offset threshold for CO has no meaning or applicability. For this reason, the District is proposing to remove the CO offset threshold for non-attainment areas. Although no CO attainment problems are anticipated due to the significantly cleaner mobile source fleet in California, and similar reductions from stationary sources, if the District is found to be in non-attainment for CO in the future, the District will be required to adopt appropriate NSR revisions in a timely manner.

[9] EPA designated the Valley as attainment for the CO NAAQS on 3/31/1998, effective 6/1/1998 (73 Fed. Reg. 66759-66775).

F. PM2.5 Annual Offset Equivalency Tracking

The District uses several innovative NSR program provisions, such as more certainty and flexibility in the use of Emission Reduction Credits (ERCs) and enhanced offsetting requirements, which were designed to make the permitting process less burdensome and more certain and transparent for both affected industry and the District while still maintaining compliance with federal NSR requirements. As part of an agreement between the EPA and the District to allow this rule flexibility, the District is tracking the ERCs collected under its NSR program and must make an annual demonstration that these ERCs are equivalent to both the amount of surplus ERCs, and the total amount of ERCs, to those which would be collected under a federal NSR offsetting program.

Section 7 of Rule 2201 specifies the tracking and reporting actions involved with the annual equivalency demonstration and steps to be taken to correct any ERC shortfalls. This section also details the required actions to be taken if an ERC shortfall occurred. Rule 2201 has a self-implementing offset shortfall remedy procedure which entails following the federal offsetting requirements directly, until the shortfall is eliminated. The system is designed to be invisible to permittees unless equivalency cannot be demonstrated and the indicated remedies must be implemented.

As currently written, Rule 2201, Section 7, is pollutant neutral. It requires the appropriate tracking and demonstrations for all pollutants for which federal offsetting requirements are triggered. Therefore, Section 7 fully addresses the use of PM2.5 offsets and requires the appropriate tracking and annual demonstration without any change in rule language. To date, there have not been any new major sources or federal major modifications that required the use of PM2.5 offsets in the San Joaquin Valley, and as such, none have been reported to EPA in the annual offset equivalency reporting requirements, as required in Section 7.

G. Proposed Rule Amendments

The proposed amendments in Draft Rule 2201 are outlined below:

- Section 3.24: Revise the Major Source Emission Threshold for PM2.5 in Table 3-3 to lower it from 200,000 lb/year to 140,000 lb/year. The proposed amended table reads as follows:

POLLUTANT	THRESHOLD (POUNDS PER YEAR)
VOC	20,000
NOx	20,000
CO	200,000
PM2.5	140,000~~200,000~~
PM10	140,000
SOx	140,000

- Section 3.28: Expand the definition of PM2.5 to include the definition of Particulate Matter from District Rule 1020 to clarify that the condensable portion of particle pollution is included in PM2.5. The proposed amended PM2.5 definition reads as follows:

  PM2.5: particulate matter, including any material except uncombined water, which exists in a finely divided form as a liquid or solid at standard conditions, with an aerodynamic diameter smaller than or equal to a nominal 2.5 microns.

- Section 4.5.3: Remove the reference to CO (non-attainment areas) in Table 4-1 as there are no non-attainment areas in the Valley, and remove the phrase (attainment areas) from the CO (attainment areas) line. The proposed amended table reads as follows:

POLLUTANT	SSPE2 (POUNDS / YEAR)
VOC	20,000
NOx	20,000
~~CO (non-attainment areas)~~	~~30,000~~
CO ~~(attainment areas)~~	200,000
SOx	54,750
PM10	29,200

- Section 8: Allow certain Temporary Replacement Emissions Units to utilize the temporary application shield provided for in Section 8. The proposed amended sections reads as follows:

  8.0 Application Shield for Routine Replacement and Temporary Replacement Emissions Unit (TREU)

  8.1 For a Routine Replacement or a TREU for which an Authority to Construct is required, the permitted source may continue to operate under an application shield, provided that all of the following conditions are met.

  8.1.1 An application for the Routine Replacement or TREU has been submitted within seven calendar days of completing the

construction or installation of the routine or temporary replacement.

8.1.2 The source operates in compliance with all applicable requirements of the federal, state, and District rules and regulations.

8.1.3 For a TREU, all of the following conditions must be met:

8.1.3.1 The TREU results in no increase in design capacity, unless a replacement unit of the same or lower design capacity is not available, in which case the replacement can result in a design capacity increase of up to 10%.

8.1.3.2 The TREU results in no change to the permitted throughput or emissions due to a change in the design capacity as part of the replacement.

8.1.3.3 The TREU performs the same function as the equipment being replaced.

8.1.3.4 The TREU either is addressed by a BARCT rule or is equipped with a control device capable of at least 85% emission control.

8.2 When the application has been deemed complete by the APCO, the application shield shall be made effective retroactive from the date of application submittal until the application is either approved or denied.

8.2.1 The application shield is not applicable if the District's final action is delayed due to the failure of the applicant to submit timely information requested by the District. The source must also submit additional information for any requirements that become applicable after a complete application is submitted, but before a PTO is issued.

8.3 The application shield does not exempt the operator from any applicable requirements.

8.4 The application shield applies only to ~~an~~ applications for ~~a~~ Routine Replacements, and TREUs meeting the requirements of 8.1.3.1 through 8.1.3.4, and does not authorize any increases to the permitted throughput or emissions due to a change in design capacity as part of a Routine Replacement or a TREU.

8.5 For a TREU that is removed from the Stationary Source within seven calendar days of completing the installation of the TREU, the application requirements of Section 8.1.1 shall not apply, provided the permittee submits, within seven calendar days of completing the

installation of the TREU, a report to the District demonstrating compliance with the requirements of Section 8.

IV. PROTECT CALIFORNIA AIR ACT OF 2003 - SENATE BILL 288

California Health and Safety Code sections 42500 through 42507 (SB 288) mandates that a district's New Source Review (NSR) rules cannot be made less stringent, in a variety of specified areas, than the rules that existed on December 30, 2002. This legislation was crafted and signed into law specifically to prevent Districts from implementing any Federal NSR reforms that would have relaxed California's stringent NSR requirements.

The state Air Resources Board (ARB) has provided guidance on the implementation of SB 288 (California Air Resources Board Guidance, *New Source Review and Senate Bill 288* (August 2004, as amended April 2006)), and has concluded that there are four components of NSR that are affected by SB 288:

1. NSR applicability determinations;
2. The definitions of "modification", "major modification", "routine maintenance", and "repair or maintenance";
3. The calculation methodology, thresholds, or other procedures of new source review. ARB further interprets this to apply to baseline determinations, calculating emissions changes, offset amounts required, and major source and major modification thresholds; and
4. The definitions and requirements of NSR regulations, including, on a program-wide basis, the requirement to obtain offsets[10].

Per the ARB Guidance, each of these four components apply on an individual source basis (except for offsets, as discussed in 4. above), as well as on a programmatic basis. The proposed amendments to District Rule 2201 do not include any changes to the applicability of the District's NSR requirements (except for lowering the PM2.5 Major Source threshold). Each of the proposed amendments to Rule 2201 will be evaluated below to determine if there could be a relaxation of the NSR requirements for these four components.

A. Changing the Major Source Definition

District Rule 2201, Section 3.24 is being amended to revise the PM2.5 major source emission threshold from 200,000 pounds per year (100 tons per year) to 140,000 pounds per year (70 tons per year) as a result of reclassification to Serious nonattainment for the 1997 and 2006 PM2.5 standards.

[10] While the District believes that this final component is an overly broad legal interpretation of the legislation, and inconsistent with the development and intent of the legislation, we believe the District's proposed amendments are complying with ARB's interpretation on this issue. However, we will reserve our right to challenge ARB on this issue at a later date, or if ARB uses this interpretation to contravene any of the District's proposed NSR amendments.

The following is an analysis of the SB288 implications of this proposed change:

1. NSR applicability determinations are not relaxed:

   Changing the Major Source definition to lower the PM2.5 major source threshold will result in more major sources of PM2.5 emissions compared to the current threshold. This proposed change will result in a more stringent requirement and will not relax the applicability of any NSR requirements.

2. The definitions of “modification”, “major modification”, “routine maintenance”, and “repair or maintenance” are not relaxed:

   Changing the Major Source definition will not change the definitions of “modification”, “major modification”, “routine maintenance”, or “repair or maintenance”. Therefore, this proposed change will not relax the definitions of “modification”, “major modification”, “routine maintenance”, or “repair or maintenance”.

3. The calculation methodology, thresholds, or other procedures of new source review are not relaxed:

   The proposed change to the Major Source definition is to lower the PM2.5 Major Source threshold, which will result in more major sources of PM2.5 emissions and will more frequently trigger the various NSR requirements related to PM2.5 major sources, resulting in a more stringent rule without relaxation of any requirements.

   An analysis of the BACT, offsets, and public notification requirements of Rule 2201 is provided below:

   a. Requirements for BACT are not relaxed:

      Rule 2201, Section 4.1 requires BACT for any increase over 2.0 lb/day and for any SB288 Major Modification or Federal Major Modification.

      Lowering the PM2.5 major source threshold will not relax these BACT thresholds.

   b. Requirements for offsets are not relaxed:

      Rule 2201, Section 4.5 requires emission offsets to mitigate new or increased emissions above specific thresholds and any emission increase for stationary sources which already exceed the offset thresholds.

Lowering the PM2.5 major source threshold will not relax any offset thresholds or any calculation methods for determining offset requirements. PM2.5 offsets will now be required for new sources at 70 tons per year rather than 100 tons per year due to the new Major Source threshold.

c. Requirements for public notice are not relaxed:

Public Noticing is required for significant new or modified sources of emissions. Rule 2201, Section 5.4 lists the five thresholds which, if exceeded, will trigger a public notification.

Lowering the PM2.5 major source threshold will not relax any public notice thresholds. In fact, with more major sources of PM2.5 emissions, more projects may be subject to public notification requirements by virtue of more projects being Federal Major Modifications.

4. The definitions and requirements of NSR regulations, including, on a program-wide basis, the requirement to obtain offsets, are not relaxed:

The proposed change to the Major Source definition lowers the PM2.5 Major Source threshold, which will strengthen NSR requirements. This proposed change will not relax the requirement to obtain offsets, on a project specific or program wide basis. Instead the rule revisions will require additional offsets as more PM2.5 major sources will now have to provide offsets. Therefore, this proposed change is not a relaxation of any definition or requirements of NSR regulations or the requirement to obtain offsets.

This proposed change will only result in the strengthening of certain NSR requirements since the proposed 70 tons per year PM2.5 Major Source threshold is more stringent than the current 100 tons per year threshold. Therefore, this proposed change will not relax any NSR requirements and will not be a relaxation under SB288.

B. Clarifying the PM2.5 Definition

District Rule 2201, Section 3.28 is being amended to include the definition of Particulate Matter from District Rule 1020 to address CAA requirements for PM2.5. The current PM2.5 definition says that PM2.5 is Particulate Matter, and Particulate Matter is defined in Rule 1020 as all matter, including the condensable portion, except uncombined water; therefore, PM2.5 includes the condensable portion of particulate pollutants. However, since the definition of Particulate Matter is included in Rule 1020 and not Rule 2201, the District is amending the Rule 2201 PM2.5 definition to clarify that PM2.5 includes the condensable portion of particle pollution. Since this proposed amendment is to incorporate the existing definition of Particulate Matter for clarity, this proposed rulemaking

action will not relax any existing NSR requirements and will not be a relaxation under SB288.

C. Adding Application Shield for Temporary Replacement Emissions Units

The proposed amendments to District Rule 2201, Section 8 are to allow certain types of Temporary Replacement Emission Units (TREUs), as discussed above, to utilize the application shield that Section 8 offers to Routine Replacements.

The following is an analysis of the SB288 implications of this proposed change:

1. NSR applicability determinations are not relaxed:

   Including certain TREUs in the Section 8 application shield is not a relaxation to an NSR applicability determination. TREUs will continue to be subject to all the same NSR requirements to which TREUs are currently subject. As noted above, the proposed permit shield addresses the nonsensical situation that allowed a permanent replacement to proceed without an application while requiring TREUs, often required to address emergency breakdowns or malfunction situations, to obtain a permit before installation. Also note that, for a source to take advantage of the permit shield in Section 8, a TREU must meet all the same requirements as a Routine Replacement.

2. The definitions of “modification”, “major modification”, “routine maintenance”, and “repair or maintenance” are not relaxed:

   The proposed changes to Section 8 will not change the definitions of “modification”, “major modification”, “routine maintenance”, or “repair or maintenance”. Therefore, this proposed change will not relax the definitions of “modification”, “major modification”, “routine maintenance”, or “repair or maintenance”.

3. The calculation methodology, thresholds, or other procedures of new source review are not relaxed:

   The sole purpose of the application shield is to allow a source to voluntarily complete the installation of a Routine Replacement, or certain TREUs, without first submitting the required Authority to Construct (ATC) permit application. The application shield does not relieve the source from complying with all other applicable requirements of the District’s NSR program.

   For those TREUs removed within 7 days of installation, the required submission of the report demonstrating compliance with the requirements of Section 8 serves as the functional equivalent to an Authority to Construct, while removing unnecessary paperwork from the process. Permittees violating any of the permit shield

requirements of Section 8 lose the permit shield and will be subject to enforcement action and full compliance with NSR requirements of Rule 2201. Therefore, the proposed changes to Section 8 will not relax any NSR requirements.

An analysis of the BACT, offsets, and public notification requirements of Rule 2201 is provided below:

a. Requirements for BACT are not relaxed:

Rule 2201, Section 4.1 requires BACT for any increase over 2.0 lb/day and for any SB288 Major Modification or Federal Major Modification.

TREUs are currently exempt from BACT per Section 4.2.5, and the proposed changes to Section 8 will not change the existing exemption.

b. Requirements for offsets are not relaxed:

Rule 2201, Section 4.5 requires emission offsets to mitigate new or increased emissions above specific thresholds and any emission increase for stationary sources which already exceed the offset thresholds.

TREUs are currently exempt from offsets per Section 4.6.5, and the proposed changes to Section 8 will not change the existing exemption.

c. Requirements for public notice are not relaxed:

Public Noticing is required for significant new or modified sources of emissions. Rule 2201, Section 5.4 lists the five thresholds over which a project will trigger a public notification if exceeded.

As a TREU cannot operate at the same time as, and cannot result in greater emissions than the unit being replaced, like a Routine Replacement, a TREU does not trigger the public notification requirements of Rule 2201. Since the requirements for a TREU will not be changed with this proposed rulemaking action, there will be no relaxation to the public notification requirements as a result of this proposed change.

4. The definitions and requirements of NSR regulations, including, on a program-wide basis, the requirement to obtain offsets, are not relaxed:

This proposed change will not affect the requirement to obtain offsets since TREUs are exempt from offsets. Therefore, this proposed change is not a relaxation of any definition or requirements of NSR regulations or the requirement to obtain offsets on a project specific or program wide basis.

As outlined above, this proposed change will only serve to include in the Section 8 application shield a TREU that would meet all the same requirements as a Routine Replacement. A TREU that qualifies for the application shield will be subject to all applicable NSR requirements that a TREU is currently subject to; therefore, this proposed change will not relax any NSR requirements and will not be a relaxation under SB288.

D. Removing the CO Non-attainment Area Offset Threshold

As discussed above, all areas of the Valley were classified as attainment for the CO ambient air quality standard in 1998. Therefore, the CO non-attainment area offset threshold in Rule 2201 has not been relevant for the past 17 years. The proposed amendments to District Rule 2201, Section 4.5.3 (Table 4-1) consist of removing the offset threshold for CO in non-attainment areas, and specifying that the existing offset threshold for CO in attainment areas applies throughout the Valley.

The following is an analysis of the SB288 implications of this proposed change:

1. NSR applicability determinations are not relaxed:

   Removing the CO (non-attainment areas) offset threshold will result in no changes to the offset requirements because there are no CO non-attainment areas in the Valley, and therefore, no offset requirements have been or will be triggered in the San Joaquin Valley for CO non-attainment areas. Also note that the entire Valley was designated as attainment for CO in 1998, well before the SB288 NSR Rule comparison date of December 30, 2002. Therefore, removing the CO (non-attainment areas) offset threshold will not relax any applicable requirements of the District's NSR program.

2. The definitions of "modification", "major modification", "routine maintenance", and "repair or maintenance" are not relaxed:

   Removing the CO (non-attainment areas) offset threshold will not change the definitions of "modification", "major modification", "routine maintenance", or "repair or maintenance". Therefore, this proposed change will not relax the definitions of "modification", "major modification", "routine maintenance", or "repair or maintenance".

3. The calculation methodology, thresholds, or other procedures of new source review are not relaxed. An analysis of the BACT, offsets, and public notification requirements of Rule 2201 is provided below:

a. Requirements for BACT are not relaxed:

Rule 2201, Section 4.1 requires BACT for any increase over 2.0 lb/day and for any SB288 Major Modification or Federal Major Modification.

This change is to remove an existing, irrelevant offset threshold. It will not change the existing BACT thresholds or requirements.

b. Requirements for offsets are not relaxed:

Rule 2201, Section 4.5 requires emission offsets to mitigate new or increased emissions above specific thresholds and any emission increase for stationary sources which already exceed the offset thresholds.

Removing the CO (non-attainment areas) offset threshold will result in no changes to the offset requirements because there are no CO non-attainment areas in the Valley, and therefore, no offset requirements have been or will be triggered in the San Joaquin Valley for CO non-attainment areas. Also note that the entire Valley was designated as attainment for CO in 1998, well before the SB288 NSR Rule comparison date of December 30, 2002. Therefore, removing the CO (non-attainment areas) offset threshold will not relax any applicable offset requirements of the District's NSR program.

c. Requirements for public notice are not relaxed:

Public Noticing is required for significant new or modified sources of emissions. Rule 2201, Section 5.4 lists the five thresholds over which a project will trigger a public notification if exceeded.

Public notification requirements are triggered at various thresholds. For instance, public notification is required when an existing source proposes a modification that increases their allowed emissions from below to above an offset threshold or when a new source proposes emissions above an offset threshold. Removing the CO (non-attainment areas) offset threshold will result in no changes to the public noticing requirements because there are no CO non-attainment areas in the Valley, and therefore, no public noticing requirements have been or will be triggered in the San Joaquin Valley for CO non-attainment areas. Also note that the entire Valley was designated as attainment for CO in 1998, well before the SB288 NSR Rule comparison date of December 30, 2002. Therefore, removing the CO (non-attainment areas) offset threshold will not relax any applicable public noticing requirements of the District's NSR program.

4. The definitions and requirements of NSR regulations, including, on a program-wide basis, the requirement to obtain offsets, are not relaxed:

   Removing the CO (non-attainment areas) offset threshold will result in no changes to the offset requirements because there are no CO non-attainment areas in the Valley, and therefore, no offset requirements have been or will be triggered in the San Joaquin Valley for CO non-attainment areas. Also note that the entire Valley was designated as attainment for CO in 1998, well before the SB288 NSR Rule comparison date of December 30, 2002. Therefore, removing the CO (non-attainment areas) offset threshold will not relax any applicable project specific or program wide offset requirements of the District's NSR program.

Since this proposed amendment is to remove an irrelevant provision that cannot apply to any source, this proposed rulemaking action will not relax existing NSR requirements and will not be a relaxation under SB288.

V. RULE DEVELOPMENT PROCESS

EPA's Final Rule requires states to submit an approvable NSR program for the PM2.5 standard within 12 months after reclassification as Serious nonattainment. Thus, for this requirement, EPA mandates that our NSR program needs to be submitted into the SIP before May 7, 2016 (80 FR 18528).

District staff will host a public workshop on November 10, 2015 and are soliciting written comments from the public, affected sources, ARB, and EPA by December 1, 2015. Any comments received during the public comment period will be addressed, and incorporated into the draft rule as appropriate.

After the initial public comment period, the district will publish another staff report and draft rule. These will be published at least thirty days prior to adoption by our Governing Board which is currently scheduled for January 21, 2016. Upon adoption, Rule 2201 will be forwarded to ARB which will forward to EPA for inclusion into the SIP.

VI. COST EFFECTIVENESS AND SOCIOECONOMIC IMPACT ANALYSIS

Pursuant to CH&SC Section 40920.6(a), the District is required to analyze the cost effectiveness of new rules or rule amendments that implement Best Available Retrofit Control Technology (BARCT). The draft amendments do not add BARCT requirements and therefore are not subject to the cost effectiveness analysis mandate.

Additionally, state law requires the District to analyze the socioeconomic impacts of any proposed rule amendment that significantly affects air quality or strengthens an emission

limitation. The draft amendments will have neither effect; therefore, the draft amendments are not subject to the socioeconomic analysis mandate.

VII. RULE CONSISTENCY ANALYSIS

Pursuant to CH&SC Section 40727.2(g) a rule consistency analysis of the draft rule is required if the draft rule strengthens emission limits or imposes more stringent monitoring, reporting, or recordkeeping requirements. The draft rule does not strengthen emission limits or impose more stringent monitoring, reporting, or recordkeeping requirements; therefore, a rule consistency analysis is not required.

VIII. ENVIRONMENTAL ASSESSMENT

Pursuant to §15061 of the Guidelines for Implementation of the California Environmental Quality Act (CEQA), District staff will investigate the likely environmental impacts of the proposed amendments to Rule 2201. The purpose of this rule-amending project is to add the federal PM2.5 new source review requirements under subpart 4 of the CAA. The proposed amendments include clarifying the PM2.5 definition to clarify that PM2.5 includes condensable particulate pollution, addressing PM2.5 precursor pollutant applicability, and revising the PM2.5 major source emission threshold from 100 TPY to 70 TPY. Further, the proposed amendments include removing the CO (non-attainment area) offset threshold and including certain categories of Temporary Replacement Emissions Units to the application shield provisions of the Rule. District staff will conduct an investigation further in the rule development process and recommend appropriate action to the District Governing Board.