Appendix I

Summary of Significant Comments and Responses

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SUMMARY OF SIGNIFICANT COMMENTS FOR THE NOVEMBER PROPOSED PM2.5 PLAN

WRITTEN COMMENTS, NOVEMBER 20, 2012 PROPOSED PLAN

14 comment letters were received following the posting of the *Proposed 2012 PM2.5 Plan* on November 20, 2012.

Alvernaz, Colette (Alvernaz)
Bingham, Susan (Bingham)
Bowen, Rosita (Bowen)
Bucknell, Lee (Bucknell)
Concerned Citizen (Citizen)
Cook, Jim (Cook)
David, Milton C., MD (David)
Eden, Vicki (Eden)
Guith, David (Guith)
Hesson, Steve (Hesson)
Lemos, Roxanne (Lemos)
Macfarlane, Peter and Emmy (Macfarlane)
Schmitt, Gwen & Brent (Schmitt)
Witt, Paul (Witt)

District note: The vast majority of public comments received during this comment period, summarized below, are related to Rule 4901 and general air quality concerns.

1. **COMMENT:** All wood burning should be terminated in the Valley for both health and aesthetic reasons. (Guith)

RESPONSE: The current PM2.5 plan commitment is a proposal to lower the wood burning curtailment threshold to minimize emissions build-up during multi-day periods of stagnation. This is expected to increase the number of "no burn" days, though the exact increase in "no burn" days will depend on future air quality. Wood burning would still be allowed when dispersion is good and such activity would not be expected to lead to unhealthy 24-hour average PM2.5 concentrations.

2. **COMMENT:** The District should not amend Rule 4901 to increase the number of no-burn days because Valley residents rely on wood burning devices for heating during the winter, and further limiting their use could create more of an economic burden. (Alvernaz, Bingham, Macfarlane, Schmitt, Witt)

RESPONSE: Achieving additional emissions reductions from residential wood combustion is critical for the Valley to reach attainment of EPA's 2006 PM2.5 standard. The proposed rule amendment would also achieve significant health benefits for Valley residents. A number of issues associated with lowering the curtailment threshold would need to be addressed in the process of amending Rule

4901, including the economic impact to Valley residents, and how clean certified devices would be treated under a lower threshold. The District would amend Rule 4901 under a full public process where all options would be evaluated, and public comments would be taken and considered.

3. **COMMENT:** EPA certified stoves and pellet stoves should not be subject to Valley "No Burn" day restrictions, since these devices burn much cleaner than fireplaces and non-certified wood stoves. Consideration should be given to those who have made an investment in these cleaner burner technologies. (Bucknell, Hesson, Lemos)

RESPONSE: The District commits to analyze the feasibility of allowing the use of clean certified wood-burning devices at some curtailment levels during the next rule-amending process. Enforcing this added flexibility would be difficult, given the challenge in distinguishing wood smoke emissions from various wood burning devices, and the District would explore various options during the rule development process for ensuring that this issue is addressed. The District values the cleaner burning technology that has been developed in recent years, as demonstrated by the implementation of the District's *Burn Cleaner Program*, which was implemented to help Valley residents upgrade their current wood-burning devices and open fireplaces to natural gas or propane devices, or clean pellet devices.

4. **COMMENT:** Time and resources could be better spent if the Valley was split into two regions, north and south, instead of issuing and enforcing individual county burn restrictions. Living on one side or the other of a county line is arbitrary since smoke travels and can affect neighboring counties. (Lemos)

RESPONSE: The District focuses on county-level forecast areas for several reasons: (1) to better allow for ease of communication to the public; (2) to make best use of the hourly PM2.5 data available from monitoring sites throughout the Valley; and (3) to allow residents to use wood burning devices when that activity is not projected to result in unhealthy PM2.5 levels in their area or downwind areas.

5. **COMMENT:** If the Valley has a "no burn" day, the Bay Area (BAAQMD) should impose a "no burn" day too, since the winds carry their smoke over the mountains and become trapped in our Valley. (Lemos)

RESPONSE: The Valley's exceedances of 24-hour PM2.5 standards typically occur during periods of stagnation (no wind) in the Valley, limiting the ability of transport of emissions from other air basins into the Valley. With that said, while the District does not have regulatory authority over the BAAQMD, the BAAQMD has adopted a wood burning curtailment program that helps to minimize emissions.

6. **COMMENT:** The District should better address almond and walnut harvesting, which is still generating significant pollutant emissions. The District should conduct more studies to determine the effect of these practices on our air quality and evaluate practices that can reduce emissions. (Citizen, David, Eden)

RESPONSE: District Rule 4550 (Conservation Management Practices) addresses fugitive dust emissions from agricultural operations, including requirements to reduce emissions from nut harvesting operations. There is ongoing research on new technology that can reduce emissions from harvesting nuts, and the District has also committed to further study the effectiveness of CMPs in reducing PM2.5 emissions and PM2.5 concentrations.

7. **COMMENT:** Air quality is a major issue year-round according to pulmonary specialists. The focus should also be during the summer when farming and trucking are at peak. (Cook)

RESPONSE: The District's air quality strategies address both PM2.5 (generally a winter issue) and ozone (generally a summertime issue). The Valley must continue to make air quality progress to reach EPA's air quality standards for both PM2.5 and ozone. Since oxides of nitrogen (NOx) are a precursor to both, NOx emissions reductions are a key part of District's overall air quality strategies. This *2012 PM2.5 Plan* focuses on PM2.5, but many strategies in the plan also benefit ozone. The District also has plans focused specifically on ozone.

8. **COMMENT:** The District should consider pushing wreckage off the road to reduce pollution from backed up traffic on Freeway 99 due to collisions, similar to other cities like San Francisco. Trucks should also be restricted to one lane within the city limits at a reduced speed limit until extra lanes are added. (Cook)

RESPONSE: The District does not have regulatory authority over traffic conditions or speed limits.

9. **COMMENT:** Permits and inspections need to be established for high polluting two-stroke engines, such as those in blowers and lawn mowers. (Cook)

RESPONSE: The District is pursuing emissions reductions from lawn care equipment through its incentive programs for both commercial and residential lawn care. The District has committed to continuing these programs and to further study of this source category. See the discussion in Appendix D for more information.

10. **COMMENT:** The District should consider regulating emergency equipment and tow trucks because these types of vehicles are heavy polluters and are often left idling for extended periods. (Cook)

RESPONSE: The District does not have regulatory authority over trucks or vehicles. ARB has a regulation addressing idling of sleeper berth equipped diesel trucks, but does not regulate idling of other diesel trucks at this time.

11. COMMENT: The air quality greatly impacts the severity of allergies and it should be improved. (Bowen)

RESPONSE: The Valley's air quality has greatly improved over the past couple of decades, and it will continue to improve under this and other attainment plans. Under its Risk-based Strategy, the District continues to study air quality health impacts, inform the public of current air quality conditions, evaluate the health benefits of its attainment strategies, and prioritize programs that improve public health.

12. COMMENT: The District should consider hourly usage as a part of the evaluation for replacing/upgrading agricultural equipment. It is not economically feasible to replace an older tractor that is only used for a limited number of hours in a year. (Alvernaz)

RESPONSE: The District does consider hourly usage as part of its Agricultural Tractor/Mobile Equipment Replacement Program. This program requires applicants to report annual operation measured in hours. This data is used with engine information and details on the replacement equipment to determine the emissions that will be reduced by the replacement project. All projects funded in the program must meet a cost effectiveness threshold, ensuring that the most cost-effective replacements are funded with District resources. The program uses the cost effectiveness limit set by ARB's Carl Moyer Memorial Air Quality Standards Attainment Program.

13. COMMENT: There is confusion in determining which government agency controls which emission sources. The agency that controls wood burning says they cannot control the smoking trucks, and vice versa. It seems as though wood burning restrictions are passed more easily than truck and bus regulations. (Lemos)

RESPONSE: Local air districts, such as the San Joaquin Valley Air Pollution Control District, have regulatory authority over stationary sources (for example, industrial sources) and area sources (such as residential wood combustion) whereas the California Air Resources Board (ARB) has regulatory authority over mobile sources (such as on-road vehicles, like trucks, and off-road vehicles, like construction equipment).

14. **COMMENT:** The District should consider land-use decisions to reduce air pollution in the Valley such as: limit drive-thru lanes to handicap use only; plant low-maintenance plants instead of grass on roadway medians to cut down on the use of lawn care equipment; encourage multi-use neighborhoods; and require truck stops to be built with plug-in stations to allow trucks to be plugged in overnight to keep truck loads cool and cut down on idling. (Alvernaz)

RESPONSE: The District does not have regulatory authority over land-use planning decisions, but does perform California Environmental Quality Act (CEQA) review of certain land-use projects to ensure projects do not worsen air quality in the Valley. While the District does not have regulatory authority to mandate plug-in stations at Valley truck stops, the District's *Public Benefit Grant Program* provides funding to a variety of clean-air public-benefit projects for cities, counties, special districts, and public educational institutions located within the District. One of the program options is "New Electric Vehicle Infrastructure," which provides funding towards new electric charging units. This program component is still under development, but this could be an option in the future for cities and/or counties to receive funding for additional charging stations at public rest areas.

15. **COMMENT:** "Bedroom communities" in the Valley, which serve as resting stops for commuters to and from the Bay Area, increase commute time and poor air quality. The District should educate the cities and counties that being bedroom communities for the Bay Area is not beneficial for air quality. (Alvernaz)

RESPONSE: Although the District does not have land use authority, the District continues to serve as a resource to cities and counties during their planning and CEQA processes. Through "Air Quality Guidelines for General Plans" and CEQA review, the District recommends a variety of more air quality-friendly practices that can be incorporated into developments and city planning. Also, many new developments are subject to the District's Indirect Source Review (ISR) rule, which enforces requirements to mitigate or offset emissions resulting from construction as well as increased traffic.

The Valley's "vehicle miles traveled" (VMT) is carefully analyzed in the District's air quality plans. The District will continue to support programs to reduce commute-related motor vehicle emissions reductions through its Healthy Air Living outreach, vanpool incentive program, and Employer-based Trip Reduction rule.

16. **COMMENT:** Cities and counties should design development plans that allow for increased traffic flow. Intentionally building and knowing the roadways may not be able to handle increased traffic from new development will worsen air quality. (Alvernaz)

RESPONSE: Mobile source emissions are an important consideration during the air quality planning process. While the District does not have authority to mandate

particular transportation development patterns, the District works closely with ARB and the county Metropolitan Planning Organizations (MPO) to coordinate data and analysis of on-road mobile sources. The District's plan includes "mobile source air pollutant emissions budgets," and MPO transportation planning efforts must make sure that air pollutant emissions resulting from their transportation networks and mobile source activities in their counties are within those emissions levels.

17. **COMMENT:** The District should educate cities and counties on the importance of their planning designs and CEQA Environmental Impact Reports (EIRs), and require an adequate review of air quality issues within these documents. Cities and counties should also not be exempt from obtaining permits and undergoing CEQA review for city projects. (Alvernaz)

RESPONSE: The District has several resources, including the Guide for Assessing and Mitigating Air Quality Impacts (GAMAQI), made available to assist agencies in assessing air quality impacts and to satisfy the California Environmental Quality Act (CEQA). CEQA requires agencies to assess and disclose environmental impacts including air quality impacts for any development project subject to CEQA. As a Responsible or Trustee agency under the CEQA, the District will review the air quality assessment provided by the Lead Agency in the environmental document to ensure the air quality impacts are properly addressed and evaluated, and will provide comments. The District will also recommend mitigation measures that can assist in reducing the air quality impacts to the extent feasible as required under CEQA.

District permits are applicable to any entity or stationary source within the San Joaquin Valley Air Basin subject to District rules and regulations. Any applicable stationary source within a development project will not be exempt from District permitting. However, CEQA dictates what projects are exempt or not exempt from a CEQA review and provides the framework on how cities and counties are to assess environmental impacts.

18. **COMMENT:** The District should not issue permits to developers without notifying the property owners. The District should also make sure the project matches the actual project description and verify that the project it is not violating other land uses. (Alvernaz)

RESPONSE: The District only issues permits to applicants/developers for sources that meet the applicability requirements of District rules and regulations and has a process for notifying the public about proposed projects. The District cannot make land use decisions, but has a process for evaluating District permitting projects under CEQA, and mitigating emissions impacts from developments through its Indirect Source Review Rule.

LATE WRITTEN COMMENTS, NOVEMBER 20, 2012 PROPOSED PLAN

A comment letter was received from Earth Justice after the close of the written comment period for the *Proposed 2012 PM2.5 Plan* on November 20, 2012[1].

19. **COMMENT:** The District has not supported the 2019 attainment date. The plan should assess the ability to attain the standard by an earlier date, considering the additional control measure suggestions included in this letter.

RESPONSE: Attaining the federal PM2.5 standard is extremely challenging, particularly in the southern Valley, and will require tremendous reductions in emissions. Based on the extensive body of science developed through the San Joaquin Valley Study Agency's Central Valley Particulate Air Quality Study (CPRAQS), reductions in NOx emissions reductions are particularly important for reducing PM2.5 concentrations. To achieve the NOx reductions critical for reaching attainment in the Valley, ARB has adopted regulations that will significantly reduce NOx emissions from various mobile sources. However, achieving the level of needed emissions reductions requires is tremendously costly and requires time. The reductions will ultimately be achieved in time to bring most of the Valley into attainment well before 2019, with the exception of Bakersfield.

To illustrate, in order for Bakersfield to attain a year earlier by 2018, an additional 2.4 tons per day of NOx reductions would be needed in Kern County. To put this in perspective, achieving this level of emissions reductions is equivalent to virtually eliminating all passenger vehicles in Kern County. The District's "no stone unturned" evaluation of emissions sources and emissions controls did not reveal any additional reasonably available emissions reductions opportunities that could expedite attainment, with all new control strategies proposed for implementation by 2017. There are no unused control strategies available that could achieve the reductions necessary to accelerate attainment, because every reasonable control measure is already included in the plan. Thus, since the modeled emissions targets cannot be achieved for the entire San Joaquin Valley before 2019, and 2019 is the most expeditious attainment year available.

20. **COMMENT:** The Plan improperly ignores ammonia controls. The District's rationale, focused on the relative effectiveness of precursor reductions, is not one of the tests outlined by EPA to justify ignoring precursor controls. The District should evaluated cost-effectiveness of ammonia control measures. The analysis of ammonia controls in Chapter 5 is insufficient. The plan should include controls on stationary sources of ammonia.

RESPONSE: Although the plan shows expeditious attainment and includes a comprehensive control strategy for direct PM2.5 emissions and significant PM2.5

[1] The comment letter from Earth Justice was submitted on behalf of the Center for Race, Poverty, and the Environment, the Coalition for Clean Air, Fresno Metro Ministry, the National Parks Conservation Association, the Association of Irritated Residents, medical Advocates for Healthy Air, and the Central Valley Air Quality Coalition.

precursors, the District and ARB explored the effectiveness of ammonia reductions in reducing PM2.5 concentrations. EPA's 2007 *Fine Particle Implementation* states that ammonia is presumed not to be a PM2.5 attainment precursor, but that the presumption can be reversed based on an acceptable technical demonstration showing that ammonia emissions significantly contribute to PM2.5 concentrations in a given area. The review of the extensive science available on this subject and new modeling conducted for this plan concludes that reducing ammonia emissions is orders of magnitude less effective in reducing PM2.5 concentrations than reducing directly emitted PM2.5 or NOx emissions. Additionally, the District has already reduced ammonia emissions from confined animal facilities, the largest source of ammonia emissions under its jurisdiction, by 100 tons per day through adoption of Rule 4570, the most stringent rule of its kind in the nation. The District has not found additional feasible measures that could significantly reduce ammonia emissions. Despite this current understanding of ammonia's relative insignificance as a precursor, the District has added a further study commitment to the plan to continue to analyze and support studies regarding ammonia emissions from confined animal facilities, for the purpose of evaluating the potential effectiveness of ammonia controls in reducing PM2.5 concentrations in the Valley.

21. **COMMENT:** The Plan must provide documentation that condensable PM2.5 emissions are reflected in the emissions inventory and that the analysis of controls includes these emissions.

RESPONSE: While this issue may be new and more relevant to other regions, 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. This has included instituting 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). Condensable particulates are thus a part of the total PM2.5 inventory, and reductions in condensable particulate matter emissions were included in the District's evaluation of various emission reduction opportunities for directly emitted PM2.5. Additional clarification regarding this issue is included in Chapter 4 of the plan.

22. **COMMENT:** The analysis does not include State or other control measures. The analysis should include consideration of available State mobile source controls, transportation control measures, and controls on new stationary and indirect sources that will limit emissions growth. The District needs to work with the relevant agencies to explore the full range of emission reduction strategies that could advance attainment. Concluding that because California has some of the most stringent control measures in the country, nothing more is required under RACM is insufficient.

RESPONSE: The District works with ARB and the Valley's Metropolitan Planning Organizations in compiling attainment plans, including control measures. Chapter 5 of the plan (Section 5.2.1) describes RACM requirements, noting that reasonableness must drive the analysis, and that RACM is a collection of measures that, taken as a group, advance attainment of the PM2.5 standard by at least one year. Technological feasibility and cost-effectiveness are the foundation of this analysis. Appendix C (Section C.10) notes that EPA very recently (2011) approved the California mobile source control program as RACM in the context of the most recent attainment plans. Subsequent to EPA's RACM approval, ARB strengthened its controls further, adopting the Advanced Clean Cars measure. There are no additional reasonably available control measures that could be implemented at the state level that have not been adopted (Chapter 9). All reasonable transportation control measures are being implemented by the MPOs (Section C.11.4).

23. **COMMENT:** The RACM analysis does not consistently evaluate expanding rule applicability to smaller sources. It does not provide sufficient information to assess whether the District has explored such options.

RESPONSE: The District evaluated all potential opportunities to reduce emissions from sources, as presented in Appendix D of this plan. These evaluations included rule applicability and removal of exemptions. For situations where staff was able to identify a potential opportunity by amending one of these portions of a rule, it is evaluated and discussed in Appendix D.

24. **COMMENT:** The Risk-based Strategy is flawed, misguided, and does not reflect sound science. The District's attempt to prioritize controls is overly simplistic and in certain circumstances misleading (for example, it does not address how much weight to give various health endpoints relative to other health endpoints). The District should drop this effort.

RESPONSE: It appears from this comment that the commenter may not understand the purpose of the District's Risk-Based Strategy. Under the Risk-based Strategy, the District pursues health-protective programs designed to maximize public health improvements resulting from the District's attainment plans and other strategies. This approach of maximizing public health is acknowledged and encouraged by EPA in its March 2012 implementation guidance memo. Within this guidance, and as discussed in this plan, EPA recognizes the distinction in health impact associated with different types of particulate matter species. This recognition adds a critical additional dimension to the preparation of this plan that only enhances the health benefits potentially achieved through various strategies. Rather than opposing this public-health driven strategy, opponents could instead make suggestions or otherwise assist the District in strengthening the strategy.

25. **COMMENT:** The plan should include new modeling showing emissions reductions needs, including reductions needed to attain in 2014.

RESPONSE: Development of this plan included extensive modeling efforts well beyond any PM2.5 modeling conducted in the past. ARB, working closely with the District, utilized a modeling protocol consistent with federal modeling guidance, and solicited feedback from independent researchers, experts, and EPA in developing the modeling protocol. While future year modeling may appear to be year specific (ex: 2019), it is really modeling emissions levels to determine what emissions levels are necessary to reach attainment. Once the emissions levels for attainment are determined (see the carrying capacity diagrams in Figures 4-15 through 4-24), the District evaluates the earliest year those emissions targets could be achieved (Chapter 9). As described in the response to comment 19, the majority of the Valley is projected to reach attainment before 2019 through the aggressive emissions reductions included in the 2012 PM2.5 Plan, with Bakersfield/Kern County the most challenging and last area to ultimately achieve attainment in 2019.

26. **COMMENT:** The plan should include controls for growth of stationary source emissions. Changing NSR would be an easy way to ensure that new sources will not undermine the progress the plan seeks to achieve from existing sources. The District should increase offset ratios.

RESPONSE: Growth is calculated as a part of the inventory that is used in the plan, so demonstrations of attainment already include growth. NSR is not designed to generate reductions in emissions. There are a multitude of source-specific rules that are designed to reduce emissions. NSR is intended to allow for growth without interfering with attainment, and the District has shown in the plan that NSR does exactly that.

27. **COMMENT:** The plan should add additional controls for indirect source emissions. ISR should be strengthened to (1) expand applicability, (2) increase the emission reductions required, (3) require sources to provide some minimum emission reductions before being allowed to mitigate through payment of fees, and (4) add limits on PM2.5.

RESPONSE: The District is the first air agency to adopt an indirect source rule regulating new development projects. The District's rule is recognized as the benchmark, or best available control, for regulating indirect sources. The legal issues associated with adopting and implementing indirect source regulations are numerous and complex, as is evidenced by the fact that the District has spent over five years successfully defending its existing rule in state and federal court.

ISR already includes a stringent applicability threshold that applies to a wide range of new developments. For example, the rule applies to transit projects where construction exhaust emissions result in a total of 2 tpd of NOx and PM10

combined– this applicability threshold is lower than the federal definition of major sources. Given the existing stringent requirements, expanding rule applicability to increase emissions reductions required would not be reasonable or cost-effective. Requiring minimum emissions reductions before mitigating through payment would have no net benefit on emissions reductions. For the mobile sources targeted under ISR, the PM10 emissions involved are almost all PM2.5 emissions, so the current PM10 limits are largely PM2.5 limits. More specific recommendations regarding what, in particular, could be expanded in the rule would assist the District to more fully consider this comment in the future.

28. **COMMENT:** The plan should evaluate the potential of revising Rule 9410 to increase incentives and expand coverage.

RESPONSE: Rule 9410 is a prohibitory rule and as such does not provide incentives. Rule 9410 is a unique rule, and full implementation is still being phased in. It would be premature to consider expanding coverage until the full effectiveness of the implemented rule can be evaluated. EPA has not yet approved District Rule 9410 as a revision to the SIP.

29. **COMMENT:** The plan should evaluate the potential of new fleet rules for government-owned fleets. South coast has nine separate fleet rules.

RESPONSE: Advancing the turnover of fleets is a critical component of reducing emissions. ARB has adopted fleet rules that have greatly reduced emissions from public fleet vehicles. The District also operates some of the most effective and robust vehicle grant programs in the nation. The District will continue to look into opportunities for new fleet rules, but at this time the District advances the turnover of fleets through the use of incentive funds.

30. **COMMENT:** The plan should evaluate the potential of limiting drive-through operations (limit hours of operation, restrict new construction, etc.).

RESPONSE: Drive-through operations are an indirect source of emissions in that they attract motor vehicle emissions. The District regulates indirect sources of emissions above the applicability thresholds of ISR (Rule 9510), but most drive-through operations fall below these thresholds given their low levels of emissions. In some instances, the potential benefits could also be completely offset by vehicles idling in parking lots while one of the passengers go into the restaurant, or by increased cold-start emissions in cases where engines are shut down. There would also be enforceability issues, particularly for limited hours of operations. As motor vehicle emissions decrease in general with cleaner engines, the potential benefit of limiting drive-through operations decrease further. That said, encouraging people to avoid voluntarily avoid drive-throughs is part of the District's Healthy Air Living Program.

31. **COMMENT:** The plan should evaluate the potential of usage fees on diesel trucks, for example tolls.

RESPONSE: The District already collects DMV fees for trucks that are registered in the Valley. It would take an act of Congress to allow for the establishment of toll roads in the Valley in a manner that would reduce emissions. Under federal law, there are many limits on how and for what purpose the tolls are collected; for example, collected revenues are typically dedicated to road maintenance and toll operation (23 USC Sections 129 and 131), which would not affect PM2.5 levels in the Valley. Any other types of fees on diesel trucks would potentially constitute a tax, requiring a 2/3 majority vote of support in each of the Valley's eight counties under Proposition 26. Further, this comment appears to conflict with other Earth Justice comments opposing the District's efforts to gain SIP credit for its incentive programs. The District would hope that Earth Justice would consistently support the District in its SIP creditability effort prior to advocating for the collection of new fees.

32. **COMMENT:** The plan should evaluate the potential of subsidies to encourage public transit for cities and rural areas.

RESPONSE: The District currently provides incentives for public transportation subsidies, such as transit and rail and vanpool subsidies, through the Public Transportation and Commuter Vanpool Subsidy Component of the District's *REMOVE II Grant Program*. Funding for public transportation kiosks and the construction of Park-and-Ride lots is also available through this program component.

33. **COMMENT:** The plan should evaluate the potential of investment in new transit serving the 99 corridor (South Coast is investing major funding in light rail).

RESPONSE: As noted in Appendix C, Section C.11.4, improved transit is incorporated in regional transportation plans as opportunities and funding allow, and is beyond the scope of the District's regulatory authority.

34. **COMMENT:** The plan should evaluate the potential of carpool lanes in Fresno and Bakersfield.

RESPONSE: As noted in Appendix C, Section C.11.4, high occupancy vehicle lanes are incorporated in regional transportation plans as opportunities and funding allow, and is beyond the scope of the District's regulatory authority.

35. **COMMENT:** The plan should evaluate the potential of time-use restrictions on dirty diesel trucks and equipment.

RESPONSE: EPA's PM2.5 implementation rule notes that reasonability must drive control measure analysis, and that any measures that are absurd, unenforceable, impractical, or that would cause severely disruptive socioeconomic impacts would not be required. Time-use restrictions on dirty diesel trucks and equipment could have potentially devastating socioeconomic consequences, and may be unreasonable and impractical. In addition, PM2.5 exceedances occur during multi-day periods of stagnation, so effective time-use restrictions would be overly broad. That said, the District prioritizes the replacement of diesel trucks and equipment through its incentive programs.

36. **COMMENT:** The plan should evaluate the potential of strengthening Rule 4103 (Open Burning) to eliminate exemptions and ensure that open burning is not allowed to occur on any day that fireplace burning is prohibited.

RESPONSE: The District evaluated the feasibility and cost effectiveness of alternatives to burning in the *2010 Final Staff Report and Recommendations for Agricultural Burning* (*2010 Report*). The District determined, and ARB concurred, that there were no economically feasible alternatives to open burning of certain crop categories as outlined in the 2010 Report; this conclusion was reaffirmed in the *2012 Update: Recommendations on Agricultural Burning* (*2012 Report*). Additionally, the District currently does not allow open burning on days when fireplace burning is prohibited.

37. **COMMENT:** The plan states that there are no NOx emissions reported for Rule 4104 (Reduction of Animal Matter), but also states that the source category uses thermal oxidizers. The plan should evaluate the potential of strengthening the rule to include NOx limits for thermal oxidizers.

RESPONSE: As discussed in Appendix D, rendering facilities subject to Rule 4104 generally use steam from a boiler (indirect-fired) or a rotary dryer (direct-fired) for their operations; which generate NOx emissions. These combustion units are regulated/controlled by other District rules and are therefore accounted for in the emission inventories under those source categories. See Appendix B for the complete emission inventory.

The purpose of Rule 4104 is to reduce emissions from rendering operations. Specifically, Section 5.1 states that "*A person shall not operate or use any article, machine, equipment or other contrivance for the reduction of animal matter unless all gases, vapors and gas-entrained effluent from such an article, machine, equipment or other contrivance are: 1) Incinerated at temperatures of not less than 1200°F for a period of not less than 0.3 seconds; or 2) Processed in such a manner determined by the APCO to be equally or more effective for the purpose of air*

pollution control than Section 5.1.1 above." Most rendering facilities use thermal oxiders as a pollution control device to incinerate effluent from the rendering process, and reduce odors and their potential nuisance impact. Although there are auxiliary NOx emissions from the combustion of supplementary fuel, there are only a few of these units in the San Joaquin Valley, and are not a significant NOx emissions source. Any new units would be evaluated through the District's Best Available Control Technology New Source Review requirements. As discussed in Appendix D, District Rule 4104 is as stringent as or more stringent than other air districts in California, and has been deemed as RACT by EPA. However, the District will continue to evaluate the potential for additional emissions reductions from this source category during future plan development projects.

38. **COMMENT:** The plan should evaluate the potential of strengthening Rule 4309 (Dryers and Dehydrators). Finding that reducing the NOx limit to 3.9 ppmv at 19% O2 for asphalt plants would reduce the margin of compliance for units is not a sufficient rationale for rejecting controls. If a lower limit is feasible, sources will achieve it and determine for themselves how best to ensure compliance.

RESPONSE: As stated in Appendix D, all of the asphalt plants in the Valley have already installed low-NOx burners or modified their units to meet the 4.3 ppmv limits applicable to them. As result of these alterations, these facilities meet the more stringent 3.9 ppmv limit discussed in the comment. Therefore, this type of amendment would be administrative in nature since it would not require any additional control equipment or changes in operating techniques or practices to comply and would not generate additional emission reductions from these units.

39. **COMMENT:** The plan should evaluate the potential of strengthening Rule 4311 (Flares) to strengthen the flare minimization planning requirement to cap the amount of produced gas that can be burned, like the Santa Barbara rule.

RESPONSE: More specific information on the commenters perceived differences between the Santa Barbara and San Joaquin Valley flare rules would help the District to more fully consider and respond to this comment. The District did a thorough analysis of flare rules in other air districts in California during both this plan development process and the 2009 rule-amending project and determined that District Rule 4311 is as stringent as or more stringent than flares rules in other air districts. EPA concurs with this assessment as illustrated by the approval of the rule as a SIP revision in 2011. The District has committed to a further study of the flare rules to continue to evaluate potential opportunities for additional emission reductions from these sources (see Appendix D, and Chapters 5 and 10 for more details).

40. **COMMENT:** The plan should evaluate the potential of strengthening Rule 4352 (Solid Fuel-Fired Boilers) to explore fuel switching requirements. There is no

reason, economically or otherwise, that sources in the Valley should be allowed to burn coal. Requiring such fuel switching is a permissible control measure and is both technologically and economically feasible.

RESPONSE: One former coal fired facility, DTE Stockton, has already switched to biomass, and the four other coal/coke fired boilers in the Valley are being fired on biomass part of the time. In addition, these units have installed highly effective emission control systems for NOx, SOx, and PM emissions. These four boilers even have more stringent NOx limits within their permit requirements than some of the biomass facilities and the municipal solid waste facility in the Valley. Source testing confirms that they are meeting even lower limits than those in their permits. Thus, mandating that these four facilities eliminate the use of coal would not generate additional emission reductions from these units. Like DTE Stockton, favorable market conditions will allow facilities to adapt to biomass fuel. The District evaluated additional potential emission reduction opportunities, as included in Appendix D.

41. **COMMENT:** The plan should evaluate the potential of strengthening Rule 4550 (Conservation Management Plans) to ensure all sources are applying the most effective emission reduction techniques. The District should revisit its menus and eliminate options that undermine the application of superior reasonably available control measures.

RESPONSE: As discussed in Appendix D, the District has adopted the most stringent regulatory requirements in the nation for reducing particulate matter emissions (primarily PM10) from agricultural sources. Agricultural operations are currently achieving significant emission reductions from the implementation of a broad set of conservation practices. While Rule 4550 has been successful in reducing both PM10 and PM2.5 emissions, recent studies have indicated that the PM2.5 fraction of emissions makes up a small portion of the total particulate emissions from agricultural operations. Additionally, PM2.5 emissions from these sources make up a minor fraction of 24-hour PM2.5 concentrations in the peak winter season, the geologic nature of these particulate matter emissions are of relative low toxicity. Therefore, District does not recommend any additional regulatory requirements under Rule 4550. The District has committed to continue to analyze and support studies in support of establishing a more accurate inventory of PM2.5 emissions and identifying potential additional emission reduction opportunities.

42. **COMMENT:** The plan should evaluate the potential of strengthening Rule 4702 (Internal Combustion Engines) to meet tighter NOx and PM limits by May 2013. The District should explore further emission reductions available for this source category, including a lower NOx limit and fewer exemptions for IC engines.

RESPONSE: Rule 4702 was amended in August 2011 to implement more stringent NOx limits for non-agricultural operations engines, with compliance dates ranging

from 2014 through 2017. Based on this recent action and ongoing rule requirements, there are no additional emission reduction opportunities for non-agricultural engines at this time. Additionally, the District's analysis of Rule 4702 determined that lower NOx emissions limits are not currently technologically or economically feasible for agricultural operations engines. Refer to the control measure discussion for Rule 4702 in Appendix D for the complete analysis of the current NOx emissions limits in Rule 4702, which also includes the District's evaluation of potential opportunities by amending rule exemptions.

43. **COMMENT:** The District is working with SCAQMD to develop new technologies that will make it possible for the regulated community to comply with new regulations for Rule 4692 (Commercial Charbroiling). The District should implement controls on under-fired charbroilers now that would provide additional emission reductions, similar to those in BAAQMD such as controls on new under-fired charbroilers, and controls on existing under-fired charbroilers.

RESPONSE: While there are promising technology demonstration efforts underway, time is still needed to prove the technologies in actual restaurant conditions and for the technologies to become commercially available. Even though BAAQMD Regulation 6 Rule 2 already applies to under-fired charbroilers, restaurants have been able to avoid control devices by staying under the applicability limits. In fact, the District is not aware of any restaurants that have been required to install controls under BAAQMD's regulation. Given the current state of technology, considerable time, investment, and effort will be needed in order to develop viable technologies. A compliance date of 2017 would accelerate the development and demonstration of new technology. The District will utilize its Charbroiler Incentive Program (ChIP) to assist in the demonstration and implementation of the technologies in anticipation of the 2017 compliance date. Furthermore, the amendment of District Rule 4692 would go through an extensive public process, during which the District will address the cost effectiveness of installing the new technologies and the socio-economic impacts of the proposed regulation.

44. **COMMENT:** The District has committed to reviewing and amending Rule 4905 (Natural Gas-Fired, Fan-Type, Residential Central Furnaces) in 2014, that is too late given the public health consequences Valley residents face as a result of the District's delayed attainment of the PM2.5 standard. The District should commit to reviewing and amending the rule earlier than 2014.

RESPONSE: The District committed to amend Rule 4905 in the District's *2008 PM2.5 Plan* with a date of 2014 given the uncertainty that manufacturers will be able to meet the more stringent limits in the South Coast Rule 1111, the rule for which this commitment is based upon. In 2010, the SCAQMD released an RFP for the development of prototype ultra-low NOx natural gas-fired fan-type central furnaces; the resulting projects are currently on-going. The District will work closely

with the SCAQMD staff throughout the technology development project and when Rule 4905 is amended, the NOx emission limits will be technologically feasible and cost effective requirements.

45. **COMMENT:** The plan should evaluate the potential of strengthening Rule 8061 (Paved and Unpaved Roads) to consider changes to the daily trip threshold and to evaluate tightening controls on the roads currently covered by the rule.

RESPONSE: The District evaluated opportunities to strengthen Rule 8061 and determined that lowering the trip threshold is not a viable emission reduction opportunity. Additionally, air quality monitoring and modeling shows that the geologic fraction of PM2.5 found in the San Joaquin Valley makes a relatively small contribution to overall PM2.5 mass, and studies have shown that geologic dust, by itself, has relatively low toxicity. In addition, emissions from unpaved roads are lowest in the winter when the majority of PM2.5 exceedances occur. For a more detailed analysis, see Appendix D.

46. **COMMENT:** The plan should evaluate the potential of strengthening Rule 8081 (Agricultural Sources). The District should revisit its dust control options and eliminate options that undermine application of superior options that are reasonably available.

RESPONSE: The District evaluated opportunities to strengthen Rule 8081 and did not identify any viable emission reduction opportunities. Additionally, air quality monitoring and modeling shows that the geologic fraction of PM2.5 found in the San Joaquin Valley makes a relatively small contribution to overall PM2.5 mass, and studies have shown that geologic dust, by itself, has relatively low toxicity. This rule applies to off-field agricultural sources and the dust control requirements are as or more stringent than those in other air districts. For a more detailed analysis, see Appendix D.

47. **COMMENT:** With regards to SC 005 (Asphalt/Concrete Operations), the District should investigate ways in which it can help local jurisdictions incorporate warm-mix asphalt technologies into their operations.

RESPONSE: The District has committed to a 2013 further study evaluation of the feasibility of warm mix asphalt over hot-mix asphalt. The District must first verify potential emission reductions as well as cost effectiveness and technological feasibility of warm mix asphalt before encouraging local jurisdictions to incorporate the technologies into their operations.

48. **COMMENT:** The current weight of evidence analysis is written to defend the modeling results and assumptions, but does not provide separate analyses or

independent evidence supporting the conclusion that the area will attain. The plan should provide additional evidence and analyses to test the conclusions of the model.

RESPONSE: As a part of the weight-of-evidence analysis for the *2012 PM2.5 Plan*, the District conducted a speciated linear rollback analysis as discussed in Appendix 5 of Appendix G (PM2.5 Weight of Evidence). The District's speciated linear rollback analysis serves as a separate analysis with the goal of corroborating the results of regional model. This independent analysis arrived at similar projected design values in 2019 for the Fresno and Bakersfield areas, providing further evidence that the conclusions of the regional model are sound.

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SUMMARY OF SIGNIFICANT COMMENTS FOR THE OCTOBER DRAFT OF THE PM2.5 PLAN

VERBAL COMMENTS, OCTOBER 9, 2012 ARB PORTION OF PUBLIC WORKSHOP

Approximately 16 people (non-District, non-ARB) in attendance (9 Fresno, 5 Bakersfield, 2 Modesto)

City of Shafter (Shafter)
Environmental Protection Agency (EPA)
Kings County Department of Public Health (KCDPH)
Southern California Gas Company (SCGC)

49. **COMMENT:** Do other parts of the state have speciated monitors? (SCGC)

RESPONSE: Yes, there are 14 speciated monitors outside of the Valley. More information about California's state and local air monitoring networks is found at http://www.arb.ca.gov/aaqm/mldaqsb/amn.htm.

50. **COMMENT:** Is organic carbon a good indicator for diesel exhaust? (SCGC)

RESPONSE: Elemental carbon is a better indicator for diesel exhaust than organic carbon. However, there are other sources that contribute to elemental carbon so it is not the only source. There is no indicator unique to diesel exhaust only.

51. **COMMENT:** Can you explain organic nitrates? Peroxyacetyl Nitrate (PAN) acts as a night reservoir for NOx. Can it also provide a reservoir during the day in the wintertime? (SCGC)

RESPONSE: Nitrates are typically gases, but they can take the form of a particulate under certain conditions. In the summer, these compounds are less important and PAN acts as a nighttime reservoir. However, the colder temperatures during the winter season can create a daytime reservoir as well.

52. **COMMENT:** Are all federal, state, and local programs that have been incorporated into the ARB emissions modeling identified somewhere in the plan, along with their emission reduction benefits? (Shafter)

RESPONSE: EPA's March 2012 PM2.5 Implementation Guidance memo (page 3) recommends that states first identify emissions reductions programs that have been adopted and implemented at the federal, state, and local levels, and then use this information to evaluate the air quality improvement the programs are projected to provide. The context of this recommendation is for areas to consider the air quality

improvement from the collective strategy to determine the area's likely attainment date and the amount of additional emissions reductions needed to reach attainment. Toward this end, the plan documents existing federal, state, and local measures in Appendices C and D, and in Chapter 5. Appendix B summarizes some of the major activities that have reduced emissions. Chapter 4 describes the design value progress that will result from all adopted and newly proposed measures. Additional information regarding adopted state and federal control measures may be found in the supporting staff reports and documentation for each of the respective measures.

53. **COMMENT:** In the March letter from EPA, they discuss greenhouse gases (GHGs). Will it be recognized and included in the modeling? (Shafter)

RESPONSE: This plan addresses the most recent 24-hour standard PM2.5 standard adopted by EPA in 2006, and does not address GHGs or global warming. GHGs and global warming are primarily being addressed at the state and federal level, for example, through California's passage of Assembly Bill 32 in 2006.

54. **COMMENT:** The organic nitrate reservoir is referred to in the modeling protocol, is there concrete evidence supporting it or is it measurement based? (EPA)

RESPONSE: The role Peroxyacetyl Nitrate (PAN) plays as a night reservoir is well established in the San Joaquin Valley Air Basin, as well as other air basins. For example, a study conducted by John Seinfeld[2] on air quality in the South Coast Air Basin demonstrated disbenefits of VOC reductions with regard to PM2.5 formation. ARB collected data on organic nitrates in the Valley in June 2012 and see similar evidence of this phenomenon in the San Joaquin Valley data.

55. **COMMENT:** What is the relative contribution of wood combustion and diesel mobile sources to organic carbon? (EPA)

RESPONSE: The receptor modeling conducted for this plan differentiates the sources of carbon, and recent data has determined the ratio of organic carbon to be about 50/50 between burning and mobile sources.

56. **COMMENT:** The District stated that reductions in ammonia were less effective at reducing ammonium nitrate, especially in urban areas. Is there any plan to do sensitivity studies of ammonia reductions in localized urban areas? (EPA)

RESPONSE: ARB has conducted ammonia sensitivity runs, with results included in Chapter 4 and Appendix G (Weight of Evidence). Carrying capacity diagrams

[2] Meng, Z., Dabdub, D., and Seinfeld, J.H., 1997, Chemical Coupling Between Atmospheric Ozone and Particulate Matter, Science, 277, 116-119.

showing the effectiveness of ammonia reductions compared to other precursors have been added to Chapter 4. These modeling results and other studies conclude that reducing ammonia emissions is much less effective at reducing ammonium nitrate concentrations than reducing NOx or direct PM2.5 emissions. However, the District has committed to further study ammonia emissions at confined animal facilities, including potential ammonia controls and their effectiveness in reducing the Valley's PM2.5 concentrations.

57. COMMENT: What are some of the primary sources of ammonium nitrate? (KCDPH)

RESPONSE: Ammonium nitrate is formed from emissions of NOx and ammonia. The primary sources of NOx are on- and off-road mobile sources, while ammonia is emitted from livestock operations, fertilizer applications, and mobile sources. See Chapter 4 for the full discussion of ammonium nitrate formation in the Valley.

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VERBAL COMMENTS, OCTOBER 9, 2012 DISTRICT PORTION OF PUBLIC WORKSHOP

Approximately 19 people (non-District, non-ARB) in attendance (11 Fresno, 5 Bakersfield, 3 Modesto)

8TM, Fresno (8TM)
Aptco LLC (AC)
Center for Race, Poverty, and the Environment (CRPE)
Central Valley Air Quality Coalition (CVAQ)
City of Shafter (Shafter)
Coalition for Clean Air (CCA)
Golden Valley Health Centers (GVHC)
Paramount Farms (PF)
Sherriffs, Alexander C., M.D. (Sheriffs)
Southern California Gas Company (SCGC)
Spa Doctor Spa and Stove Center (SDSSC)

58. **COMMENT:** How much emissions reductions are expected for Rule 9610 and will those reductions count towards the District's attainment demonstration? (CCA)

RESPONSE: The emissions reductions credited under Rule 9610 will be determined through annual reporting. The procedure for these annual reports will be determined during the development of Rule 9610 in 2013. At this time, the District is identifying 1.9 tons per day (tpd) of NOx reductions in 2019 to serve as contingency reductions for this plan. These reductions were not credited as a part of the attainment demonstration. See Chapter 6 for the discussion for Rule 9610 and Chapter 9 for additional information on contingency measures.

59. **COMMENT:** Could ammonia emissions reductions be used for contingency purposes? Why doesn't the District pursue ammonia emissions reductions, since there is a surplus of ammonia emissions in the Valley and it is becoming more difficult for the Valley to achieve cost effective NOx emissions reductions? (CCA)

RESPONSE: This plan shows that sufficient reductions in NOx and PM2.5 are available to bring the Valley into attainment and to fulfill the contingency requirement. The extensive evaluation of the potential benefit of ammonia reductions to the Valley's PM2.5 concentrations demonstrates that it would take an unreasonable magnitude of ammonia reductions to significantly reduce PM2.5 concentrations. Additionally, there are not any feasible measures available to reduce ammonia emissions by this magnitude (see Chapters 4 and 5). Therefore, it would not be beneficial to use ammonia reductions as contingency in place of NOx or direct PM2.5 reductions. That said, District Rule 4570 (Confined Animal Facilities) is the most stringent regulation in the nation for livestock operations and already achieves significant ammonia and VOC reductions. Furthermore, the

District has committed to further study ammonia emissions at confined animal facilities, potential ammonia controls for these facilities, and the effectiveness of these controls in reducing the Valley's PM2.5 concentrations (see Chapter 5).

60. **COMMENT:** Under Rule 9610, how will the District get SIP credit for emissions reductions achieved through incentive programs and ensure that Clean Air Act requirements for enforceability are still met? (CRPE)

RESPONSE: District incentive programs have been modeled from effective state incentive programs like the Carl Moyer Program. Enforceability has already been built into the District incentive programs through requirements that include pre and post-project equipment inspections, monitoring and reporting. The development of Rule 9610 will provide the mechanism for the District to take credit for these surplus, quantifiable, and enforceable emissions reductions.

61. **COMMENT:** If the District does not know how many people will opt into their incentive programs, how will you estimate a certain amount of emissions reductions and take credit for those reductions as a part of Rule 9610? (CRPE)

RESPONSE: The proposed plan does not take any credit for emissions reductions from incentives to demonstrate attainment (see response to comment 58). Final credit for Rule 9610 emissions reductions will be based on reporting of actual participation in SIP-creditable incentive programs. The details of this process under Rule 9610 will be established through a public rule development process in 2013.

62. **COMMENT:** Are all federal, state, and local programs that have been incorporated into the ARB emissions modeling identified somewhere in the plan, along with their emission reduction benefits? (Shafter)

RESPONSE: See response to comment 52.

63. **COMMENT:** Page C-1 states that land use decisions are under the jurisdiction of the MPOs, but in actuality cities and counties have the authority. (Shafter)

RESPONSE: Appendix C has been corrected with the appropriate language.

64. **COMMENT:** EPA recently released new federal Corporate Average Fuel Economy (CAFE) standards. How will those new standards be accounted for in the plan? (SCGC)

RESPONSE: EPA's August 2012 CAFE standards set emissions limits for carbon dioxide for model years 2017-2025. ARB has also adopted a new regulation

addressing light-duty motor vehicle efficiency known as the Advanced Clean Car regulation. ARB has recently found the federal regulation to be equivalent to the state regulation. Future reductions from implementation of these new efficiency and emissions standards have been accounted for in this plan.

65. **COMMENT:** The charbroiling source category is important for the District's risk-based strategy and reaching attainment. How does setting a compliance date for 2017 help to reach attainment as "expeditiously as possible"? (GVHC)

RESPONSE: Promising prototype technologies are being demonstrated through South Coast AQMD's charbroiler demonstration project, which the District has been actively participating in. However, time is still needed to prove the technologies in actual restaurant conditions (whereas the South Coast project is being conducted in a research facility) and for the technologies to become commercially available. Given the current state of technology, a compliance date of 2017 will accelerate the development and demonstration of new technology. The District will utilize its Charbroiler Incentive Program (ChIP) to assist in the demonstration and implementation of the technologies in anticipation of the 2017 compliance date. Furthermore, the amendment of District Rule 4692 will go through an extensive public process and will be the opportunity to address specific issues such as the cost effectiveness of installing the new technologies and the socio-economic impacts of the proposed regulation. See Appendix D for additional information on the Rule 4692 (Commercial Charbroiling) control measure.

66. **COMMENT**: When will the results of the SCAQMD technology demonstration project for charbroiling be completed? How much money has the District invested in the study thus far? (GVHC)

RESPONSE: Results from South Coast's technology demonstration project are expected later this year or early next year. The District has contributed $500,000 of funding to its own ChIP (Charbroiler Incentive Program) demonstration program thus far, and will use this program to seek partnering restaurants with which to demonstrate emissions controls at Valley operated restaurants. Additional funding may be contributed to the South Coast or other demonstration efforts as opportunities become available.

67. **COMMENT:** In regards to the commitment to establish emission limit(s) for under-fired charbroilers, is this the first time a rule has been adopted or committed to without sound knowledge regarding the availability or efficiency of potential control technologies? (GVHC)

RESPONSE: Similar to the Guiding Principle #2 for this plan (use sound science as the plan's foundation), the District uses sound science with every rule making action. The District has never adopted or committed to a regulation without sound

knowledge regarding the availability or efficiency of potential control technologies. However, due to the severe nature of the Valley's pollution problems, the District has adopted regulations that have been "technology-forcing", whereby requiring emissions controls that are effective in controlling emissions, but have not yet been widely implemented for a specific source category. Examples include Rule 4306, where large boilers, steam generators and process heaters were required to install ultra-low NOx burner technologies in order to meet the emission limits established by the rule; or Rule 4703, where turbines have been required to install post-combustion controls such as Selective Catalytic Reduction (SCR) systems to achieve the NOx limits of the rule. Furthermore, the amendment of District Rule 4692 will go through an extensive public process and will provide opportunities to address specific issues such as the state of new technology, cost effectiveness of installing new technologies, and the socio-economic impacts of the proposed regulation.

68. **COMMENT:** How much of an emission reduction benefit would the Valley gain from the amendment to the charbroiling rule? (Sheriffs)

RESPONSE: Amending Rule 4692 to include charbroilers will reduce about 0.1 tons per day of directly-emitted PM2.5 in Kern County, and about 0.3 tons per day in other Valley counties combined for a total of 0.4 tons per day of reductions in directly-emitted PM2.5. Due to the location of these emissions reductions, and because this would reduce directly-emitted PM2.5, there would be a significant benefit to ambient PM2.5 concentrations as a result of this amendment: 0.6 $\mu g/m^3$ reduction in the PM2.5 concentration for Bakersfield. Not only does this help assure attainment in the Bakersfield area, but the PM2.5 species and location of emissions reduced will achieve relatively large health benefits, consistent with the District's Risk-based Strategy.

69. **COMMENT:** Some facilities operate thermal oxidizers year round to destroy VOCs. Given the potential disbenefit associated with reducing VOCs with regard to PM2.5 formation, could removing control equipment and allowing higher VOC emissions during the winter serve as a potential PM2.5 control strategy? (AC)

RESPONSE: While modeling shows there is a potential disbenefit from reducing VOC emissions with regard to PM2.5 formation, the magnitude is relatively small and will not assist with attaining the federal PM2.5 standard. Furthermore, weakening existing regulations may have a detrimental public health impact to workers and Valley residents working in or living near facilities.

70. **COMMENT:** When the District amends Rule 4901, it should consider allowing residents who have invested in cleaner burning, EPA-certified wood burning devices to use those devices at some curtailment levels, as an incentive for investing in these cleaner devices. (SDSSC)

RESPONSE: The District commits to analyze the feasibility of allowing the use of clean certified wood-burning devices at some curtailment levels during the next rule-amending process. Enforcing this added flexibility would be difficult given the challenge in distinguishing wood smoke emissions from various wood burning devices, and the District would explore various options during the rule development process for ensuring that this issue is addressed. The District values the cleaner burning technology that has been developed in recent years, as demonstrated by the implementation of the District's *Burn Cleaner Program*, which was implemented to help Valley residents upgrade their current wood-burning devices and open fireplaces to natural gas or propane devices, or clean pellet devices to alleviate the problem of particulates.

71. **COMMENT:** It would be helpful to provide a summary of the inventory, including the percentage of emissions reductions committed to from the state and the District, as part of workshops. (CVAQ)

RESPONSE: The District presented the emissions inventory for various PM2.5-related pollutants during the workshop, and detailed emissions inventory information was published as part of various drafts of the *2012 PM2.5 Plan* ahead of public workshops (see Appendix B).

72. **COMMENT:** The District should consider prohibiting open air charbroiling on No-Burn days. (CVAQ)

RESPONSE: During the rule-amending project for Rule 4692, the District will evaluate potential opportunities for emissions reductions and consider technological feasibility, cost-effectiveness, and socio-economic impact.

73. **COMMENT:** Social vulnerability should be considered as a part of the District's Risk-based Strategy. There also seems to be a low priority for rural communities as a by-product of the District's Risk-based Strategy. (CVAQ)

RESPONSE: Public health in all parts of the Valley, including rural communities, are important and considered in the proposed *2012 PM2.5 Plan* and the District's Risk-based Strategy. This vulnerability is also acknowledged in the District's Environmental Justice Strategy.

74. **COMMENT:** The District should consider addressing the stench of mega dairies as they can cause serious impacts on poor and/or small communities around them. (CVAQ)

RESPONSE: Dairies are subject to the District's permitting program and are inspected regularly to ensure compliance with District regulations. In fact, dairies

are subject to Rule 4570 (Confined Animal Facilities), the most stringent rule of its kind in the nation, and are already required to implement best management practices to ensure emissions are minimized.

75. **COMMENT:** On Slide 16, what percentage of NOx emissions is on-road versus off-road? Is ARB rulemaking factored in? If their rules get delayed, how will the District handle not reaching these goals? (CVAQ)

RESPONSE: The emissions inventory is presented in Appendix B of the plan. In 2019, mobile source emissions account for about 79% of the total NOx emissions inventory. Of this, about 63% is on-road mobile and 37% is other mobile. ARB rulemaking is factored into the projected emissions, and the proposed plan (and other prior plans, including the *2007 Ozone Plan* and *2008 PM2.5 Plan*) includes enforceable commitments to achieve the emissions reductions necessary for attainment.

76. **COMMENT:** Every October in the last ten years has had an exceedance of the 35 µg/m³ PM2.5 standard. Is there any evidence that these exceedances are not at least partially attributable to residential wood burning? Why is October not included in the wood burning curtailment period of Rule 4901? Why not ban residential wood burning altogether? (8TM)

RESPONSE: There have been measured PM2.5 concentrations above 35 µg/m³ in Octobers of years past. Expanding the curtailment season to include October would potentially increase the number of curtailment days in each wood burning season based on recent air quality data. However, measured Valley concentrations of levoglucosan, a primary indicator for wood burning, are not nearly as high in October as found to be in November through February (refer to Appendix D for further discussion). While it appears that there would be little benefit in expanding the woodburning season to October, the District will consider this option when the rule is amended under this plan.

77. **COMMENT:** Can you address how you will be changing old regulations that are part of businesses being regulated to the point of diminishing returns and spending millions of dollars with minimal benefits? (PF)

RESPONSE: The District recognizes the significant cost associated with regulations that have been adopted to reduce emissions from stationary source businesses. This plan includes a thorough analysis of all sources of emissions of directly-emitted PM2.5 and the Valley's significant PM2.5 precursors to identify whether there are any additional opportunities for reducing emissions. This analysis is presented in the 200+ page Appendix D, and new rule commitments are included in Chapter 5.

VERBAL COMMENTS, OCTOBER 16, 2012 DISTRICT MEETING WITH CVAQ

The District, ARB, EPA, and members of CVAQ (Central Valley Air Quality Coalition) met to discuss the PM2.5 Plan and related issues.

78. **COMMENT:** The District should consider amending the Indirect Source Review (ISR) Rule to expand rule applicability.

RESPONSE: The District is the first air agency to adopt an indirect source rule regulating new development projects. The District's rule is recognized as the benchmark, or best available control, for regulating indirect sources. The legal issues associated with adopting and implementing indirect source regulations are numerous and complex, as is evidenced by the fact that the District has spent over five years successfully defending its existing rule in state and federal court. A specific recommendation would assist the District to more fully consider this comment.

79. **COMMENT:** The District should consider amending the flare rule (Rule 4311). For example, Santa Barbara has a stronger flare rule than the San Joaquin Valley.

RESPONSE: More specific information on the commenters perceived differences between the Santa Barbara and San Joaquin Valley flare rules would help the District to more fully consider and respond to this comment. The District did a thorough analysis of flare rules in other air districts in California during both this plan development process and the 2009 rule-amending project and determined that District Rule 4311 is as stringent or more stringent than flares rules in other air districts. EPA concurs with this assessment as illustrated by the approval of the rule as a SIP revision in 2011. The District has committed to a further study of the flare rules to continue to evaluate potential opportunities for additional emission reductions from these sources (see Appendix D, and Chapters 5 and 10).

80. **COMMENT:** District-issued variances undermine the strength of its rules.

RESPONSE: California state law establishes and requires that the District have three hearing boards which take petitions for, and make decisions on, variance requests from local District rules as well as certain specified provisions of state law. Such variances are only allowed in situations where compliance is beyond the reasonable control of the operator and where requiring immediate compliance would result in the practical closing of a lawful business or the arbitrary or unreasonable taking of property without a corresponding benefit in reducing air contaminants. For both short and long term variances, the District provides public notice of the hearing and members of the public are afforded the opportunity to attend the hearing and provide comments to the board before it acts on the variance request.

Many variances are purely administrative in nature and do not provide relief from emission standards contained in applicable rules and/or operating permits. For those variances which do provide relief from emission standards, the board must ensure that excess emissions will be reduced to the maximum extent feasible. As a result, excess emissions allowed by variances are minimal and represent less than 0.01% of the emission inventory for NOx and VOC emissions. Furthermore, prior to granting a variance the potential air quality impacts must be considered to ensure that the variance will not result in the creation of a public nuisance or the exceedance of an ambient air quality standard.

Aside from being required by state law, the variance process allows the District to develop and implement the most stringent rules and regulations knowing that if unique and unexpected circumstances arise, the variance process allows a mechanism to address these temporary situations. Without such a process, rules would have to be developed to address such unique and temporary circumstances and would not be as stringent as necessary to address attainment issues and plan commitments.

81. **COMMENT:** The District should consider adopting a public fleet rule like South Coast rule.

RESPONSE: ARB has adopted a Solid Waste Collection rule that, similar to South Coast's rule, reduces emissions from refuse vehicle fleets. South Coast Air Quality Management District's fleet rule requires that solid waste collection vehicle fleets transition to operating entirely on alternative fuel beginning in 2011. ARB's Solid Waste Collection Vehicles Rule gives fleet operators several options to meet Best Available Control Technology requirements for particulate emissions by the end of 2010. One compliance option under the ARB rule is the use of alternative fuel. Many of the District's SWCV fleets have already converted to alternative fuels. Transitioning a fleet from diesel to alternative fuel can be costly and may not be economically feasible (see Appendix C for a more detailed discussion). Additionally, the emissions benefit associated with such a transition is minimal given the stringent particulate matter requirements under ARB's rule. The District will continue to advance the turnover of SWCVs through the use of incentive funds rather than adopting a fleet rule.

82. **COMMENT:** Has ARB's upcoming agricultural equipment rule been accounted for in this PM2.5 plan?

RESPONSE: This rule is currently under development as an ozone plan control measure, and emissions reductions from this future strategy have not been accounted for in this PM2.5 plan. Any reductions in PM2.5 precursors from this rule would be in addition to the emissions reduction commitments included in this plan.

WRITTEN COMMENTS, OCTOBER 9, 2012 WORKSHOP

EPA REGION IX COMMENTS:

83. **COMMENT:** Since the plan projects attainment by 2017 for all locations except the Bakersfield-California Avenue monitor, the plan should document how the projected attainment dates for the other monitors were determined.

RESPONSE: The projected attainment dates for various regions of the Valley were based on the plan's attainment modeling. Projections of earlier attainment dates were based on 2019 emissions and modeled design values; 2007 emissions and actual design values; and emissions inventory trends between 2007 and 2019. As seen in Table 4-1, various regions of the Valley are projected to see concentrations much lower than the federal standard of 35 $\mu g/m^3$ in 2019.

84. **COMMENT:** The plan should include an economic and technological feasibility analysis of all identified control measures, and the measures found to be economically and technologically feasible should be evaluated for RACM.

RESPONSE: The plan identifies all potential opportunities to reduce emissions with associated economic and technological feasibility analyses (see Appendix D). All potential opportunities determined to be technologically feasible and cost effective, and therefore "reasonable" that are also under the District's jurisdiction are being recommended as control measures for this plan (see Appendix D and Chapters 5 and 10).

85. **COMMENT:** The plan should document the methods used to derive the interpollutant trading ratios, including an explanation of why the methods are reasonable for contingency measures and transportation conformity, if the plan includes a trading mechanism for transportation conformity purposes. The methods should be consistent with the results of ARB's sensitivity analyses using photochemical modeling.

RESPONSE: The 8:1 NOx to PM2.5 interpollutant ratio is included in the transportation conformity discussion in Appendix C. Discussion on the derivation of this trading ratio has been added to the contingency analysis in Chapter 9. The Weight of Evidence Analysis (see Appendix G) documents the methodology used to develop the relative efficacy of emission reductions from the different PM2.5 precursors based on photochemical modeling sensitivity runs.

86. **COMMENT:** The plan relies on new emissions reductions in 2019 and 2020 to meet the contingency measure requirement for failure to attain. All reductions for contingency purposes should be for the same year.

RESPONSE: The labeling of the attainment year contingencies will be reviewed for consistency. Since attainment would be based on air quality data collected through the end of 2019, all attainment year contingencies, if needed, would be triggered starting in 2020 (see Chapter 9).

87. COMMENT: CAA requirements for contingency measures cannot be fulfilled with commitments to adopt measures in the future. Therefore, the plan cannot rely on emission reductions from new and/or revised requirements in Rules 4692, 4901, and 9610 to meet the contingency requirement until the District adopts and EPA approves these new requirements.

RESPONSE: The District commits to adopting each of these measures before the year in which contingency reductions are credited in the *2012 PM2.5 Plan.* EPA should consider conditionally approaching these contingency measures, on the condition that the District adopts these contingency measures by the dates committed to in the plan.

88. COMMENT: The District should include an analysis in the plan supporting the specific emission reductions claimed for Rule 9610 for contingency purposes for on-going incentive programs. This should include a discussion of the funding level needed to achieve the claimed emission reduction, expected sources of funding, the basis for assuming that sufficient funding will be available, and the likely source categories and calculation assumptions that could result in sufficient surplus reductions.

RESPONSE: Chapter 6 of the Plan includes a detailed description of the various funding sources available to the District, as well as different incentive programs that are operated by the District. These programs have reduced over 93,000 tons of NOx, VOC, and PM2.5 emissions since 1992. The District conservatively estimates that $30 million of incentive funding would be needed to achieve the 1.9 tpd of contingency reductions committed to under this plan. Using a combination of secured funding sources, including, but not limited to funding available through motor vehicle surcharge fees (as authorized under AB 2522, AB 923, SB 709), and State Carl Moyer Program funds, the District is confident that incentive reductions in excess of the committed contingency reduction will be achieved as needed. It is important to note that the majority of incentive-based emission reductions generally have a life of five to ten years, with some as long as 20 years. The District expects that continued implementation of its incentive programs over the next several years, including expenditure of the $184 million of incentive funds included in the District's 2012-13 Budget, will achieve emissions reductions well in excess of the amount potentially needed in the event of contingency. Primary sources of these incentive-based emissions reductions would include the replacement of heavy duty diesel powered engines and equipment used in various on and off-road applications. Incentive program implementation, including verification of emissions reductions and calculation assumptions, are based on state methodologies, with the Carl

Moyer Program serving as the primary guideline for the District's heavy duty equipment incentive programs.

89. **COMMENT:** If the District intends to use incremental reductions in 2020 from non-mobile source measures for contingency purposes, the plan should identify these measures and their incremental reductions. Also, the plan should document the portions of the 2020 inventory relied on for contingency measures.

RESPONSE: Approximately 0.1 tpd of the emissions reductions in 2020 utilized for contingency purposes are resultant from District regulatory measures for stationary and area sources. The remaining 12.2 tpd of reductions in 2020 are from mobile sources. See Chapter 10 for the complete discussion of the control strategies fostering the needed emissions reductions for contingency purposes.

90. **COMMENT:** The proposed contingency measures include most of the reductions from the new charbroiling and wood burning controls, excluding the reductions in Kern County that are used to demonstrate attainment. The final plan should document that these reductions outside of Kern County are not included in the modeled attainment demonstration, and are therefore truly excess.

RESPONSE: Chapter 4 has been updated to clarify that only emissions reductions in Kern and Kings Counties were needed to model attainment.

91. **COMMENT:** The *2008 PM2.5 Plan* projected SOx levels at 21 tpd in 2014 while the draft *2012 PM2.5 Plan* projects 9 tpd in the same year. The District should include an explanation for this change in the SOx inventory in Appendix B.

RESPONSE: The changes to the SOx inventory for 2014 can be largely attributed to new stationary and area source control measures adopted by the District since 2008. Recent amendments to rules such as Rule 4354 (Glass Melting Furnaces) and Rule 4306/4320 (Boilers, Steam Generators, and Process Heaters Greater than 5.0 MMBtu/hr) have and will continue to foster significant SOx emissions reductions since new compliance dates will come into effect through 2014. In addition, the District and ARB have thoroughly reviewed the refine point source inventory and growth factors for SOx to ensure the accuracy of the SOx inventory.

92. **COMMENT:** For Rule 4692, EPA supports the District's plan to regulate under-fired charbroilers. EPA recognizes that the District allocates considerable funding to install and demonstrate retrofit controls at existing facilities and encourages the District to consider supporting the SCAQMD's current under-fired charbroiler demonstration project.

RESPONSE: The District appreciates EPA's recognition of efforts to develop new technology for under-fired charbroilers. The District will continue to support this effort, including exploring additional opportunities to collaborate with SCAQMD.

93. **COMMENT:** For Rule 4901, EPA supports the District's plans to lower the curtailment level. The District should consider revised wood burning device requirements including prohibiting the sale or installation of any uncontrolled, traditional fireplaces in new or existing developments, and requiring stronger standards for allowed wood-burning devices.

RESPONSE: During the rule amendment process, the District will consider all feasible options for strengthening Rule 4901. Additionally, the District commits to analyzing the feasibility of allowing the use of the cleanest EPA certified wood-burning devices during the next rule-amending process (See Appendix D and Chapters 5 and 10). The District will also continue to follow the ongoing process regarding potential amendments to the federal New Source Performance Standards (NSPS) for wood burning devices.

94. **COMMENT:** EPA supports the development of Rule 9610 and looks forward to collaborating with the District and stakeholders during the rule development process to ensure that reductions credited to incentive programs are real, quantifiable, enforceable and surplus.

RESPONSE: The District looks forward to continuing collaboration with EPA during the development of Rule 9610.

95. **COMMENT:** ARB's preliminary sensitivity modeling results presented at recent public meetings show that reductions in ammonia emissions were comparable to the reduction needed in 2019 at the Bakersfield-California Avenue for attainment. ARB and the District should analyze whether there are feasible ammonia controls that could deliver the comparable emission reductions.

RESPONSE: Chapter 4 has been revised to more clearly quantify the potential benefit of ammonia emissions reductions. As outlined in this plan, the District and ARB are proposing a control strategy that achieves the emissions necessary for attainment of the standard. The modeling sensitivity analysis conducted for this plan shows, reductions in ammonia emissions achieve insignificant reductions in the 2019 PM2.5 design values. One ton of reduced ammonia emissions would reduce the Bakersfield-California PM2.5 design value by just 0.008 $\mu g/m^3$. There are no feasible measures that would achieve this level of ammonia emissions reductions, and NOx emissions reductions are much more effective in reducing PM2.5 concentrations (see Chapter 5).

The Valley's largest source of ammonia emissions are dairies, which are already regulated under Rule 4570 (Confined Animal Facilities). District Rule 4570 has already reduced 100 tons per day of ammonia emissions in the Valley (see Chapter 5) and the District continues to review ongoing research of ammonia controls on dairies and other confined animal facilities. For example, the District has reviewed South Coast Air Quality Management District's potential measure of episodic application of sodium bisulfate (SBS) onto manure at dairies to reduce ammonia emissions, which, as discussed in Chapter 5, would not be cost-effective or feasible for the Valley, and may have detrimental unintended consequences.

See Chapters 4 and 5 for additional discussions regarding the efficacy and feasibility of ammonia controls in the Valley. Despite ammonia's relative insignificance as a precursor, the District has committed to further study ammonia emissions at confined animal facilities, potential ammonia controls for these facilities, and the effectiveness of these controls in reducing the Valley's PM2.5 concentrations (see Chapter 5).

96. **COMMENT:** For Rule 4702, the District should update the language that states the District's limits are as stringent as SCAQMD. SCAQMD Rule 1110.2 limits NOx from all engines to 11 ppm while the District's limits range from 11-150 ppm.

RESPONSE: The District has clarified the language in the Rule 4702 discussion in Appendix D. SCAQMD Rule 1110.2 specifies a NOx limit of 11 ppmv for landfill gas or digester gas fired engines effective July 1, 2012, based on a provision to complete a technology assessment by July 2010; this limit will only be implemented if the result of the technology assessment confirms that 11 ppmv is achievable for these engines. District staff has confirmed that the technology assessment completion has been pushed back to 2012. Until such time that SCAQMD's technology assessment confirms that it is technologically and economically feasible to achieve 11 ppmv, it would not be appropriate to consider this level of control (see Appendix D for the complete discussion).

97. **COMMENT:** For Rule 4702, the District's RACM analysis should evaluate if an 11 ppm NOx limit is feasible for all engines in Valley and whether additional emissions reductions are available by eliminating rule exemptions. The analysis should also quantify all existing engines and their contribution to the inventory.

RESPONSE: As discussed in the response to Comment 96, it has not yet been determined if an 11 ppmv NOx limit is feasible for non-agricultural waste gas fueled rich-burn engines. Additionally, the District's analysis determined that an 11 ppmv NOx emissions limit is not technologically or economically feasible for agricultural spark-ignited engines. Refer to the control measure discussion for Rule 4702 in Appendix D for the complete analysis of the current NOx emissions limits in Rule 4702, which also includes the District's evaluation of potential opportunities by amending rule exemptions.

Emissions from stationary source IC engines have been reduced significantly over the past several decades, and will be reduced by 71% from the baseline year of 2007, at 20.18 tons of NOx, to 5.8 tons of NOx per day in 2019. The quantification of the contributions to the emission inventory is summarized in the emission inventory table in the Rule 4702 control measure evaluation in Appendix D and presented in greater detail in Appendix B (Emission Inventory).

98. **COMMENT:** Page D-51 states, "Current Rule 4702 (requires) combustion of PUC-quality natural gas, or other equivalent ultra-low sulfur fuels." Clarify where this requirement is in Rule 4702.

RESPONSE: This requirement is in section 5.7 *"Sulfur Oxides (SOx) Emission Control Requirements"* of Rule 4702.

99. **COMMENT:** The District should clarify that while the compliance dates for agricultural operations engines range from 2009-2018, the compliance date for spark-ignited engines was 2009.

RESPONSE: In Rule 4702, the compliance dates for agricultural operations spark-ignited engines were set at January 1, 2009 or if owner has an agreement to electrify, January 1, 2010. The control measure discussion for Rule 4702 has been updated in Appendix D.

100. **COMMENT:** For Rule 4103, explain how the District arrived at the 3,500 acre feasibility threshold for citrus orchard removals, and why analyzing individual burns is required for all nut farmers wishing to burn more than 20 acres, but not for citrus farmers of similar size.

RESPONSE: The District evaluated the feasibility and cost effectiveness of alternatives to burning in the *2010 Final Staff Report and Recommendations for Agricultural Burning* (*2010 Report*). The District determined, and ARB concurred, that there were no economically feasible alternatives to open burning of certain crop categories as outlined in the 2010 Report; this conclusion was reaffirmed in the *2012 Update: Recommendations on Agricultural Burning* (*2012 Report*). Refer to Appendix D for the complete discussion regarding citrus orchard removal burning.

101. **COMMENT:** SCAQMD's September 2012 draft AQMP seeks to reduce emissions from start-up, shut-down and turnaround. The District should include a commitment in the plan to investigate start-up, shut-down, and turnaround emission reduction opportunities in the Valley.

RESPONSE: The SCAQMD AQMP commits to a technical assessment of potential opportunities for improved start-up, shut-down and turnaround procedures in 2013.

If their research determines that there are feasible emissions reduction opportunities, they will commit to regulatory action(s) at some point in the future. SCAQMD has not yet identified any viable opportunities for improved practices for any specific stationary sources with regards to start-up, shut-down, and turnaround. The District will closely follow the progress of their technical assessment, and if SCAQMD identifies any potential emission reduction opportunities, the District will assess these opportunities to determine if they are feasible for Valley sources and evaluate the possibility of potential rule amendments.

102. **COMMENT:** The District should add specific deadlines for commitments in the plan to perform additional analyses, including those listed in Chapter 5 and Chapter 9.

RESPONSE: Chapters 5 and 10 of the plan have been updated with completion dates for the further study measures.

103. **COMMENT:** In the Risk-based Strategy discussion, the plan cites EPA guidance referring to methods local air quality plans can use to maximize health benefits and minimize risk inequality. The plan should discuss the methodologies that the District intends to use.

RESPONSE: The District's Risk-based Strategy (RBS) approach maximizes public health benefits within the Valley's efforts to attain federal standards. To qualitatively evaluate the potential risk reduction benefits from various sources, the plan employs a scientifically based five-factor exposure assessment methodology that draws on the latest scientific understanding about health risk from PM2.5 exposure. The five factors evaluated under the RBS methodology include: relevance to attainment, toxicity of chemical species, particle size and deposition, proximity to PM0.1, and population intake fraction. For additional information on the five-factor assessment methodology, refer to Chapter 2.

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WRITTEN COMMENTS, OCTOBER 9, 2012 WORKSHOP

STAKEHOLDER COMMENTS:

14 comment letters were received following the third public workshop on October 9, 2012.

8TM, Fresno (8TM)
Association of Irritated Residents (AIR)
City of Shafter (Shafter)
Clean Energy (CE)
Clum, Carole A. (Clum)
Forgnone, Penny P. (Forgnone)
Hearth, Patio, and Barbeque Association Pacific (HPBAP)
Meloni, Chanda (Meloni)
Mountain Comforts (MC)
Schlenker, Andy (Schlenker)
Spa Doctor Spa and Stove Center (SDSSC)
Treat, Erica (Treat)
Verrinder, Joel (Verrinder)
Zapien, Sarafin (Zapien)

104. **COMMENT:** When the District amends Rule 4901, it should consider allowing use of pellet stoves and/or EPA certified wood stoves at some curtailment levels to incentivize the use of cleaner wood burning technologies. Many homeowners have invested in these clean burning devices, so consideration should be given to those who have made this investment. (8TM, HPBAP, MC, Schlenker, SDSSC, Zapien)

RESPONSE: The District commits to analyze the feasibility of allowing the use of clean certified wood-burning devices at some curtailment levels during the next rule-amending process. Enforcing this added flexibility would be difficult given the challenge in distinguishing wood smoke emissions from various wood burning devices, and the District would explore various options during the rule development process for ensuring that this issue is addressed. The District values the cleaner burning technology that has been developed in recent years, as demonstrated by the implementation of the District's *Burn Cleaner Program*, which was implemented to help Valley residents upgrade their current wood-burning devices and open fireplaces to natural gas or propane devices, or clean pellet devices to alleviate the problem of particulates.

105. **COMMENT:** The District should not increase the number of no-burn days. Firewood is an inexpensive heating source and further limiting its use will create more of an economic burden on Valley families, especially in these current tough economic times. (Forgnone, MC, Meloni, Schlenker, Treat, Verrinder)

RESPONSE: As discussed in Chapter 4, achieving additional emissions reductions from residential wood combustion is critical for the Valley to reach attainment of EPA's 2006 PM2.5 standard. Furthermore, as discussed in Chapter 2 and Appendix D, reducing emissions from residential wood combustion achieves significant health benefits. During the public rule-amendment process for Rule 4901, the District will evaluate the economic impacts of reducing the wood burning curtailment level for Valley residents.

106. COMMENT: The District should extend the wood burning curtailment season to include March, April, and October. There have been days in all three months that the Valley has exceeded the 30 µg/m^3 wood burning curtailment threshold and if the threshold is lowered to 15 or 20 µg/m^3 there will be even more exceedance days in these months. (8TM)

RESPONSE: See response to comment 76.

107. COMMENT: Is the District considering any restrictions on the sale or use of charcoal briquettes for barbeques? (Zapien)

RESPONSE: The District is not considering the implementation restrictions on residential barbeques at this time. These devices are used more frequently in the summer months, whereas winter emissions reductions are most critical for attainment of the 2006 PM2.5 standard.

108. COMMENT: Since the District has to meet a yearly average PM2.5 standard of 15 µg/m3, residential wood burning should not be allowed on any day throughout the year that is predicted to exceed a 15 µg/m^3 daily average. The District should also adopt a contingency measure to automatically lower the wood burning curtailment threshold to 12 µg/m^3, or whatever more healthful standard EPA may adopt. (8TM)

RESPONSE: The 15 µg/m^3 is an annual standard, not a 24-hour standard, so the form of this standard allows for days and quarters above 15 µg/m^3. Compliance with this annual standard is determined by first averaging the daily values of each calendar quarter, then averaging those four quarters.

The residential wood-burning curtailment program targets specific episodic days when PM2.5 levels in the air quality are elevated, in order to curtail residential wood burning activity to prevent impacts to public health and exceeding the 24-hour PM2.5 NAAQS. However, by lowering winter PM2.5 concentrations, this program significantly contributes to the Valley's progress towards the annual standard. The District's *2008 PM2.5 Plan* outlines the control strategy for attaining the annual standard of 15 µg/m^3, with a projected attainment date of 2015.

109. COMMENT: The District should prioritize the mitigation of emissions from sources based on the seasonality of emissions, location of emissions, and likelihood to occur on days with high PM2.5 concentrations. (Clum)

RESPONSE: These factors are all considered, as these all relate to the Valley's progress towards attainment. In addition, as described in Chapter 2 of this plan, the District uses a five-factor exposure assessment methodology to evaluate the PM2.5 attainment strategy under the Risk-based Strategy: relevance to attainment; toxicity of chemical species; particle size and deposition; proximity to PM 0.1; and population intake fraction.

110. COMMENT: Residential fuel combustion and managed burning needs to be effectively mitigated. The District should ban greenwaste burning in the Valley and ban woodstoves and fireplaces in all new developments. (Clum)

RESPONSE: Agricultural burning is regulated by Rule 4103, the most stringent rule in the nation for agricultural burning and is evaluated every five years for effectiveness of rule requirements (see Appendix D). Under this rule, burning is only allowed on days and in amounts that do not cause violations of air quality standards. Residents are prohibited from burning any green waste. Section 5.3 of Rule 4901 already limits the installation of wood burning fireplaces and heaters in new residential developments; these requirements eliminate the installation of wood burning fireplaces in urban environments, and significantly limits the installation of wood burning heaters in urban environments (and limits these heaters to EPA-certified devices).

111. COMMENT: Residents in the foothills and mountains trim trees and brush that present a fire hazard to their homes or other buildings. The District should pay local chipping/shredding companies to dispose of these trimmed trees and plants rather than allowing these materials to be burned. (Clum)

RESPONSE: The District has committed to do a further study of the feasibility and potential opportunities for emissions reductions of a program similar to the one suggested. Refer to Chapters 5 and 10 for more details of this further study commitment.

112. COMMENT: The District should install air pollution monitors downwind of the Harris Ranch feedlot and near the mega dairies in Tulare County, monitor dairy emissions, and devise effective mitigations to these emissions. (Clum)

RESPONSE: Through partnership with other agencies and academic institutions, the District continues to study the nature and source of ammonia emissions in the San Joaquin Valley. However, as discussed in Appendix G, Chapter 4, and Chapter 5, in order to expedite attainment of the PM2.5 NAAQS, ammonia

emissions would have to be reduced by an amount that is not feasible at this time. However, the District continues its pursuit of ammonia emission reductions, as evidenced by the commitment to continue to evaluate ammonia emissions at confined animal facilities (see Chapter 5).

113. **COMMENT:** The District should not assume that there will be no growth for the residential wood combustion category. New homes developed on five acres are allowed to have woodstoves, which allows for a potential increase of wood burning devices in rural areas, the foothills, and the mountains. (Clum)

RESPONSE: While new homes developed on five acres are allowed to have woodstoves, this allowance is limited by Section 5.3 of Rule 4901; also, there is a steady turnover of wood burning stoves in the Valley. If a Valley resident sells their home with a wood burning stove, the home cannot be sold unless the stove is removed or replaced with an EPA certified wood burning device. The turnover of older, higher-polluting wood burning stoves by either uninstalling or replacing the units with newer EPA certified devices will effectively offset the potential increase in emissions that could result from any new units in the rural areas of the Valley. See the control measure discussion for Rule 4901 in Appendix D for additional information regarding this source category.

114. **COMMENT:** EPA plans to lower the PM2.5 federal standard this year. Why isn't this plan focused on mitigating emissions to achieve the new, lower PM2.5 standard? (Clum)

RESPONSE: The proposed federal PM2.5 standards are still under review with EPA and a new limit has not been finalized for approval. An attainment plan for the new PM2.5 standard will most likely be due to EPA in late 2017 or early 2018. That said, emissions reduced as a result of this plan will continue to reduce emissions in the Valley and will contribute to attainment of the new federal PM2.5 standard.

115. **COMMENT:** The plan should identify each adopted federal and state regulation that is contributing to PM2.5 improvement in the Valley and explain the degree to which each regulation is improving PM2.5 levels. Chapter 5 of the plan identifies several ARB regulations, but does not elaborate upon the effectiveness of each state regulation and it does not identify any federal regulations. (Shafter)

RESPONSE: See response to comment 52.

116. **COMMENT:** Page C-1 states that land use decisions are under the jurisdiction of the eight counties and their MPOs, but the cities and eight counties have this authority. (Shafter)

RESPONSE: Appendix C has been updated with the appropriate language.

117. COMMENT: In reference to the District's *Risk-based Strategy*, how is ammonium nitrate less harmful to public health than other forms of PM2.5? Also, are the ammonium nitrate levels in Kern County related to the preterm birth rate in Kern County? (AIR)

RESPONSE: Despite the substantial mass contribution of ammonium nitrate to regional PM2.5, the oral toxicity of nitrate is very low, with an LD50 (dose causing death for 50% of the exposed subjects) reported to be two thirds that of table salt. In reference to the relationship between ammonium nitrate and preterm births, epidemiological studies have emphasized the need to further study the links between pre-term birth and exposure to varying pollutants. See Chapter 2 for a discussion of ammonium nitrate and its potential health effects.

118. COMMENT: Does size of the particulate or the chemical makeup of the particulate determine the extent of the potential damage to one's health? (AIR)

RESPONSE: The toxicity of the chemical species and particle size both play a role in the relative health risks of various particulates. See Chapter 2 for the full discussions on the toxicity of various chemical species and risks of particulates based on particle size and deposition.

119. COMMENT: What does ammonia in the atmosphere do from the time it is emitted to when it mixes with NOx? Does the ammonia from dairies in Fresno County travel to Kern County? What is the accepted emission rate per milk cow for ammonia? (AIR)

RESPONSE: During PM2.5 episodes, high concentrations of ammonium nitrate can occur over large regions, including both urban and rural areas. Ammonia is mostly concentrated in rural areas, particularly between Fresno and Bakersfield. The regional ammonium nitrate component can be traced back to the emission sources and subsequent formation and transport processes. Gaseous precursors of ammonium nitrate (NOx and ammonia) are transported much more efficiently than directly emitted organic matter particles. Although some of the emitted NOx forms ammonium nitrate in urban areas, it is also transported to downwind regions where it reacts with ammonia to form particulate ammonium nitrate in the rural areas. While transport does occur, the distances are still limited, with transport distances of 50 to 60 kilometers in the central and southern Valley. Ying et.al. (2009) found for example that most of the PM2.5 nitrate in Bakersfield is produced from sources within the southern Valley.

Since the chemistry of NOx to nitric acid formation involves multiple steps and also depends on the availability of oxidants, only a portion of the NOx emitted ultimately forms ammonium nitrate. Photochemical modeling studies indicated that the

fraction of NOx converted varied by location, with urban regions converting little NOx to ammonium nitrate, while in remote areas up to 70 percent NOx was converted. Additional information on the formation of ammonium nitrate can be found in Appendix G (PM2.5 Weight of Evidence Analysis) of the plan.

The current emission factor for ammonia from milk cows is 74 lbs/head-year.

120. COMMENT: What is the relative abundance, in tons, of ammonia emissions versus NOx emissions in Kern County? Would reductions in ammonia emissions in Kern County reduce PM2.5 levels? (AIR)

RESPONSE: For Kern County, the 2012 winter average NOx emissions are 71.55 tpd and ammonia emissions are 44.4 tpd. The District has explored the effectiveness of ammonia as a precursor to PM2.5 formation, and has found ammonia to not be a significant precursor.

121. COMMENT: Does the chart on page 4-11 of Chapter 4 indicate that all NOx molecules react with ammonia molecules? How many tons of ammonium nitrate reductions result from one ton of NOx reduction? (AIR)

RESPONSE: The chart is a simplified representation of the ammonia surplus. Not all NOx molecules react with ammonia molecules. Only a portion of NOx emissions from motor vehicles and stationary combustion sources react through photochemical processes during the day, or react with ozone at night, to form nitric acid. When ammonia emissions react with the nitric acid, ammonium nitrate is created. CRPAQS observational data indicates that reductions in nitrate concentrations of 30% to 50% were realized through a 50% reduction in NOx. See Chapter 4 for additional information on the formation of ammonium nitrate.

122. COMMENT: Present evidence that the current dairy rule is already reducing ammonia emissions by 100 tpd. (AIR)

RESPONSE: The District analyzed emissions reductions achieved through implementation of Rule 4570 during development of the rule. Rule 4570 reduces VOC and ammonia emissions through a range of manure management measures (in addition to silage and other measures). Since ammonia emissions on dairies originates from manure, measures that more quickly and effectively handle and treat manure are effective in reducing ammonia emissions (as well as VOCs).

123. COMMENT: Reducing off-street parking and controlling curb parking will reduce pollution. The District should consider charging fees for off-street and curb parking and for the construction of parking spaces as Transportation Control Measures in the plan. Also, in some European countries there are rules requiring the shutting off

of engines at stoplights and anywhere else if the idling will be longer than 15 seconds, this might be advisable for the Valley. (AIR)

RESPONSE: The District looks forward to receiving scientific research, analysis, and data to confirm the commenter's statements that parking in a parking lot reduces emissions from parking on the street. Also, District staff were unable to confirm which European countries have laws requiring cars to be shut off. The commenter's suggestions related to parking and shutting off vehicle engines are beyond the District's regulatory authority, since it pertains to land use, and a requirement to shut off engines would likely be impossible to enforce.

124. COMMENT: The District should consider eliminating all agricultural burning except for disease control in certain rice field situations, tumbleweeds on private property, and carefully controlled burning of small quantities of dead trees or attrition in orchards. Exemptions for grape and citrus removal should be totally removed. (AIR)

RESPONSE: As evaluated in the *2010 Final Staff Report and Recommendations for Agricultural Burning* (2010 Report) and *2012 Update: Recommendations on Agricultural Burning* (2012 Report), certain categories of agricultural materials do not have economically feasible alternatives to open burning practices. Any burning allowed for these categories is strictly limited and evaluated under the District's Smoke Management System, which restricts burning under conditions that would cause a violation of air quality standards. The District reevaluates these categories every five years, with the next evaluation projected to occur in 2015. Refer to the 2010 Report for additional analyses of this rule: http://valleyair.org/Board_meetings/GB/agenda_minutes/Agenda/2010/October/Agenda_Item_7_Oct_21_2010.pdf.

125. COMMENT: All charbroilers should have to reduce 90% of particulate emissions or shut off the charbroilers on no-burn days. (AIR)

RESPONSE: During the public rule-amending process for Rule 4692, the District will evaluate potential opportunities for feasible and cost-effective methods for reducing emissions from these sources.

126. COMMENT: Discuss why the indirect source review (ISR) rule should not apply to facilities in the Valley that burn or compost biomass which has to travel more than 50 miles from collection points to processing facilities in the Valley. This is a huge source of pollution that is not covered by any rule. There should be no exception to the rule for permitted sources because these sources do not consider their transportation related emissions in their totals. (AIR)

RESPONSE: The Indirect Source Review (ISR) rule was developed to address indirect emissions from new development projects. Stationary source projects are exempted from ISR requirements because stationary source equipment are subject to District permit and in particular to the District New Source Review (Rule 2201). When exceeding specific thresholds identified under Rule 2201, stationary source equipment are required to meet Best Available Control Technology and the facility may be required to provide offsets. In addition, under the California Environmental Quality Act (CEQA) process, emission impacts resulting from mobile sources are evaluated by the lead agency (such as a land use agency) when approving the project, and mitigation could be required to reduce mobile sources associated impacts.

127. COMMENT: Flares should be strictly limited and there should be a fine for emergency flares used on no-burn days. (AIR)

RESPONSE: Flaring activities in the Valley are regulated by District Rule 4311, which is one of the most stringent rules in the nation for flares. Rule 4311 has a strict definition of what qualifies as an emergency flaring event; any flare event that an operator determines is an emergency flare event must be recorded and reported to the District for evaluation. If the District determines that the flare event does not qualify as an emergency flaring event then the operator will be issued a notice of violation. That said, the District has committed to do a further study of flaring in the Valley for potential opportunities for additional emissions reductions. The proposed commitment for the study completion date is 2013.

128. COMMENT: At the August 2012 Governing Board meeting, it was stated that the COGs may need to use some “creative accounting” in their transportation proposals in the future. What is meant by “creative accounting” in the context of the plan? (AIR)

RESPONSE: This comment is presented out of context. The discussion centered on using the most and up-to-date methods for forecasting emissions given their critical role in meeting both attainment and transportation needs.

129. COMMENT: It has been stated that 55% of truck traffic is passing through the Valley without stopping anywhere to do business with the intent of saying truck pollution is significant and the District can do nothing about it. A recent study done by the COGs states that the vast majority of tonnage moved by trucks within the valley is either intraregional, or one-way to or from points in the Valley.(AIR)

RESPONSE: The referenced study from the comment is referring to tonnage of material transported, not mileage traveled. Regardless of miles traveled, the primary regulatory authority over mobile sources lies with the ARB and EPA.

130. COMMENT: The PM2.5 Plan could greatly benefit from including a more informed discussion of natural gas (NG) as a transportation fuel in compressed, liquefied, and renewable forms. It is a missed opportunity that natural gas was absent from the mobile sources sections of the plan. Natural gas delivers similar compelling emissions benefits for mobile sources as it does for stationary sources. Additionally, natural gas is a cost effective strategy, every truck manufacturer is now in the business of natural gas vehicle (NGV) trucks due to demand, light duty NGV trucks are coming to the market, and the NG infrastructure is flourishing nationwide. (CE)

RESPONSE: The District has primarily targeted mobile sources through its incentive programs, and has maintained those programs as technology neutral. Incentive programs have included a wide array of natural gas projects including buses, package delivery vehicles, municipal vehicles such as refuse trucks and street sweepers, agricultural pumping engines, and passenger vehicles. The District will continue to maintain the technology neutral nature of the incentive programs where possible, ensuring there is opportunity for all potential solutions to be considered. Natural gas, as a cost effective solution, will likely have a continued role as an important option for emissions reductions through incentive programs.

131. COMMENT: CE supports the implementation of a refuse vehicle replacement program; CE recommends that natural gas refuse trucks be a key replacement of diesel refuse trucks and believes incentive funding would accelerate the conversion rate of Valley trucks to NG. (CE)

RESPONSE: See response to comment 130.

132. COMMENT: While funding is necessary to spur the growth of zero-emission vehicles, it is critical for the District to continue to support all promising alternative fuel strategies, such as natural gas, to ensure that the Valley has a diversified portfolio that is capable of achieving the region's air quality goals. Battery electric and hydrogen fuel cell technologies have many hurdles to overcome become becoming practical so other strategies should be considered. (CE)

RESPONSE: The District's Technology Advancement Program has at its core a set of three technology focus areas, including mobile sources. As identified in Chapter 7, the mobile source technology focus area includes zero- or near-zero emissions solutions and clean alternative fuels. It is expected that natural gas will play an important role in the future of near-zero emissions technology development, and be a significant contribution to a solution to the Valley's goods and people movement emissions.

SUMMARY OF SIGNIFICANT COMMENTS FOR THE JUNE 2012 DRAFT PM2.5 PLAN

VERBAL COMMENTS, JUNE 27, 2012 WORKSHOP

Approximately 15 people (non-District, non-ARB) in attendance (13 Fresno, 2 Bakersfield, 0 Modesto)

California Cotton Ginners and Growers Association (CCGGA)
California Dairy Campaign (CDC)
Central Valley Air Quality Coalition (CVAQ)
City of Fresno (COF)
Dennis Fox (Fox)

133. **COMMENT:** The timeline for this PM2.5 Plan seems aggressive. The plan documents were posted last Friday, leaving very little time for a thorough review. (CCGGA, CDC)

RESPONSE: Public feedback on the *2012 PM2.5 Plan* will be accepted and evaluated until the public hearing for adoption of the plan in December. Interested persons may attend and provide feedback during the District's October public workshop and other meetings, and may also provide written feedback at any time during the development of the plan. Additionally, the District may be contacted directly at any time by phone at 559-230-5800, or by email at pmplans@valleyair.org.

134. **COMMENT:** The plan should be revised to include mention of the incentives programs for unpaved roads and chipping efforts, as well as provide a full account of all the agricultural engine and pump replacements. (CCGGA)

RESPONSE: Appendix C and Appendix D have been updated as appropriate to incorporate information about the unpaved roads, chipping efforts, and agricultural engine and pump replacements.

135. **COMMENT:** There are some discrepancies with the United States Department of Agriculture National Resources Conservation Service (NRCS) funding values given in the Incentives chapter that need to be corrected. (CCGGA)

RESPONSE: The funding value discrepancies in the Incentives chapter have been reviewed and discussed with NRCS, and Appendix C and Appendix D have been updated accordingly.

136. COMMENT: The District should provide a reference for the stated 99.9% PM2.5 control efficiency of PTFE bags in the almond hulling control measure discussion. (CCGGA)

RESPONSE: Appendix D has been updated to include a reference for the 99.9% PM2.5 control efficiency in the almond hulling discussion.

137. COMMENT: The District should account for the permit condition requiring almond and pistachio hullers to have replacement bags accounting for 10% of the total number of bags in the respective control measure cost effectiveness estimates. (CCGGA)

RESPONSE: The permit conditions have been reviewed and the extra 10% of bags has been included in the cost effectiveness estimates. Refer to Appendix D for the updated cost effectiveness analysis.

138. COMMENT: The emissions inventory should be corrected by the next draft of the plan. Agricultural emissions are shown to be increasing and the opposite is true in the Valley, as the Farmland Mapping and Monitoring Plan (FMMP) data shows. (CCGGA)

RESPONSE: The draft PM2.5 emission estimates has been reviewed by ARB staff, and has been updated to reflect the latest California Department of Conservation's Farmland Mapping and Monitoring Program (FMMP) data.

139. COMMENT: In reference to the PM2.5 trends slide, what caused the spikes in emissions in 2007 and 2008? (COF)

RESPONSE: The San Joaquin Valley experienced extremely stagnant conditions in 2007 and 2008. The winters were filled with severe fog and the summers were much dryer and hotter than usual which concentrated and kept the PM pollution in the Valley. There were also extensive wildfires in 2008, further worsening the air quality in the Valley.

140. COMMENT: How does the District monitor or regulate emissions from off-road recreational vehicles? There is a motorcycle track in Taft that is concerning because of the resulting dust emissions. (Fox)

RESPONSE: The California Air Resources Board (ARB) has regulations in place for emissions from off-road recreational vehicles. ARB's State Strategy, adopted in 2007 and revised in 2011, included commitments to revisit emissions standards for the *Other Off-Road Sources* category. One of the three commitments is for expanded emissions standards for Off-Road Recreational Vehicles, which entails

adopting exhaust and evaporative emission standards to reduce VOCs from off-highway motorcycles and all-terrain vehicles. However, this is only applicable to the emissions from the engines. ARB plans to address these commitments in 2013 or 2014.

In terms of the District's role for this sort of project, this type of site would be subject to a California Environmental Quality Act (CEQA) review if creating this track is a new use and requires approval by the city or county. This would help mitigate any potential emissions or other environmental hazards resultant from the track. In addition, if the site is equal to or greater than 20,000 square feet, the construction and operational aspects of the project would be subject to District Rule 9510 (Indirect Source Review).

141. **COMMENT:** The District should include diagrams of background levels of PM emissions in the plan. (CDC)

RESPONSE: Naturally occurring background PM2.5 concentrations in the San Joaquin Valley cannot be monitored as a separate value from the rest of the mass, and therefore it would not be possible to display a trend of measured background concentrations over time. Scientific research continues to explore this topic, and any value that is proposed from such research would be theoretical. Understanding and identifying the background PM2.5 in the Valley will continue to be a topic of importance in the future.

142. **COMMENT:** The modeling numbers do not reflect daytime and nighttime variations, as well as seasonal variations, and they should reflect both. (CDC)

RESPONSE: ARB currently provides emissions inventory modeling support for the District. At this point, ARB does not have the capability to calculate separate emissions inventories to reflect daytime and nighttime variations so the annual and wintertime emissions inventories for each source category have been included. While summertime emissions have adverse health impacts, reducing these emissions will not accelerate attainment because PM2.5 exceedances in the Valley occur during winter months. Therefore, summertime inventories have not been included in this plan.

143. **COMMENT:** On slide 16 of the ARB modeling presentation, what does ARB mean by saying the nearest monitors have the greatest impact? Are we at risk of only focusing on emissions close to monitors rather than ambient emissions in the whole Valley? (CVAQ)

RESPONSE: Emissions near monitors have a tremendous impact on the Valley's control strategies because they provide a snapshot of the trends occurring throughout the entire Valley. This does not mean that only emissions around air

quality monitors will be focused on. Rather, control strategies that are regionally based and target emissions reductions throughout the entire Valley will continue to be implemented. Control strategies will also continue to be evaluated through the District's Risk-based Strategy, maximizing strategies that prioritize public health.

144. **COMMENT:** On slide 17 of the ARB presentation, which monitoring site is not expected to reach attainment by 2019? (CVAQ)

RESPONSE: The site referenced on slide 17 is the Bakersfield-California Avenue monitoring site.

145. **COMMENT:** What is the new proposed federal PM2.5 standard? How far away is the Valley from meeting that standard in the future? (CVAQ)

RESPONSE: EPA recently proposed a new annual PM2.5 standard of 12-13 µg/m3. EPA accepted comments on the proposed standard until August 31, 2012. According to EPA data, the Valley is expected to be in compliance with the proposed new annual PM2.5 standard. However, the District will use due diligence in performing our own analysis to confirm compliance with the new standard at a later date. The current 24-hour standard of 35 µg/m3 has not been proposed to be amended.

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WRITTEN COMMENTS, JUNE 27, 2012 WORKSHOP

EPA REGION IX STAFF COMMENTS:

146. **COMMENT:** The plan should identify the specific measures that are providing the identified baseline reductions and the emissions reductions associated with each measure, including compliance dates during the period that the plan covers.

RESPONSE: Measures that provide baseline reductions are summarized in Chapter 4 and Chapter 9 with a complete discussion in Appendix D.

147. **COMMENT:** The plan should include a discussion of the population growth factors including information on their values, the sources from which they are derived and the source categories they are used to project.

RESPONSE: The discussion of population growth factors is included in Appendix B.

148. **COMMENT:** As part of the RACM demonstration, the Plan should include a list of the potential measures considered by the State, District, and the SJV MPOs and analysis sufficient to show that all RACM, including reasonably available control technologies (RACT), have been adopted and are being implemented expeditiously. As part of this analysis, the plan should estimate the additional emission reductions needed to advance attainment by one year and should include a table similar to Table 9-1 from SJV's 2008 PM2.5 Plan with information on the added reductions needed for attainment in each year beyond those already anticipated from the adopted control strategy.

RESPONSE: This analysis has been incorporated into Chapter 9 of the October 2012 draft *2012 PM2.5 Plan*.

149. **COMMENT:** In addition to calculating the amount of additional emissions needed to advance attainment by a year under mainly NOx-focused controls, the Plan's air quality modeling should evaluate the additional emission reductions that would be necessary if additional reductions in VOC and ammonia emissions were considered as well.

RESPONSE: The modeling and related precursor sensitivity analysis conducted for this plan evaluates emissions of directly emitted PM2.5, NOx, SOx, ammonia, and VOCs. This analysis shows that directly emitted PM2.5, NOx, and SOx reductions contribute to improvements in PM2.5 concentrations, whereas reductions in VOC and ammonia were not significant for attaining the 24-hour federal PM2.5 standard. That said, VOC and ammonia emissions have been reduced through District regulations adopted under the District's ozone plans.

150. COMMENT: If the Plan will include provisions that rely on trading between PM2.5 and its precursors to meet CAA requirements or if the District intends to allow interpollutant trading for offsets in its New Source Review (NSR) program, the Plan should document the methods used to derive equivalency ratios and explain why the methods are reasonable. The methods should be based on the photochemical modeling used in the attainment demonstration and should account for the variability of pollutant and precursor relationships across the air basin.

RESPONSE: This analysis is in progress and will be included as an appendix to the final draft *2012 PM2.5 Plan*.

151. COMMENT: For Rule 4307, the District should consider adding PM2.5 limits to the rule in addition to existing SOx limits for non-PUC quality natural gas boilers (e.g., liquid fuel fired boilers). Also, provide a more detailed cost-effectiveness analysis (or citation to analysis) for technologies discussed and more detailed information to clarify the relative size of emission inventories associated with Rules 4307, 4308 and 4320.

RESPONSE: The possibility of adding PM2.5 limits to the rule for liquid-fired units was evaluated and it was determined that the PM2.5 control technologies available were either technologically infeasible or not cost effective, given the small emissions inventory for liquid-fired units. The previously combined emissions inventory for Rules 4307, 4308, and 4320 have been separated into three inventories. See Appendix D for the full technology evaluation and the individual inventories.

152. COMMENT: For Rule 4308, provide a more detailed cost-effectiveness analysis (or citation to analysis) for the potential opportunities identified.

RESPONSE: The possibility of reducing the instantaneous water heaters NOx limit from 55 ppm to 20 ppm was evaluated. The possibility of removing the mobile homes and recreational vehicles exemption was also evaluated; however, it was determined that these units do not fall under the size category of Rule 4308 and thus, did not require cost effectiveness analyses. See Appendix D for the full evaluation of these items.

153. COMMENT: For Rule 4320, the District should consider adding PM2.5 limits to the rule in addition to SOx limits for liquid fuel-fired boilers.

RESPONSE: The possibility of adding PM2.5 limits to the rule for liquid-fired units was evaluated and it was determined that the PM2.5 control technologies available are either technologically infeasible or not cost effective, given the small emissions inventory for liquid-fired units. See Appendix D for the full technology evaluation.

154. **COMMENT:** For Rule 4702, the District should consider adding PM2.5 limits to the rule in addition to SOx limits and analyze whether it is reasonable to require agricultural IC engines to comply with the same limits required of non-agricultural IC engines.

RESPONSE: District staff considered EPA's recommendations, which are addressed in Appendix D.

155. **COMMENT**: For Rule 4703, 40 CFR 60 Subpart KKKK (Standards of Performance for Stationary Combustion Turbines) should be referenced. Additionally, the District should consider adding SO2 limits at least as stringent as the Subpart KKKK requirements.

RESPONSE: Rule 4703 was compared to 40 CFR 60 Subpart KKKK and it has been added it to the list of federal rules and regulations evaluated. The current SO2 limits in place for facilities subject to Rule 4703 are more stringent than Subpart KKKK's requirements due to California Diesel Fuel SO2 limits and District permitting SO2 limits. See Appendix D for the full evaluation.

156. **COMMENT**: For Rule 4703, the District should add a PM2.5 BACT cost-effectiveness analysis to provide context for the PM2.5 RACM analysis.

RESPONSE: PM2.5 reduction technologies for turbines were researched in an effort to conduct a PM2.5 technology cost effectiveness analysis; however, the technologies evaluated have not been achieved-in-practice for turbines and are not technologically feasible for certain units. See Appendix D for the full technology evaluation.

157. **COMMENT:** For Rule 4703, Page D-28 references "the potential control of...fuel treatment sulfur removal systems to reduce SOx emissions and foster additional PM2.5 reductions." It appears that at least one facility in the District is equipped with this system. However, it is unclear whether this facility is subject to District Rule 2201 and therefore was required to analyze PM2.5 BACT cost effectiveness. The District should include additional discussion of this facility to help evaluate whether this control is appropriate for PM2.5 RACM.

RESPONSE: Further clarification has been added in the SOx section of the emission reduction opportunities discussion explaining why this facility is equipped with a sulfur removal system. See Appendix D for the full discussion.

158. **COMMENT**: For Rule 4703, the District should provide more narrative regarding the status of its research regarding baghouses, scrubbers and electrostatic precipitators.

RESPONSE: The analysis for Rule 4703 has been updated and it includes a complete discussion of the aforementioned control technologies. See Appendix D for the full discussion.

159. COMMENT: For Rule 4311, the District should review the newly submitted annual flare reports to update the emissions inventory and analyze EPA's additional recommendations (from the TSD associated with the proposed approval of Rule 4311, at 76 FR 52623) to help reduce emissions.

RESPONSE: The deadline of submission for the newly submitted annual flare reports was July 31, 2012. The District commits to evaluating the submitted reports for potential emission reduction opportunities, and has included a commitment to further study this category in the future. See Appendix D for the full discussion.

160. COMMENT: For Rule 4311, the District should consider developing separate refinery and non-refinery flare rules.

RESPONSE: Bifurcation of the rule for refinery and non-refinery flares was considered; however, since both types of flares are currently regulated by Rule 4311 this would be an administrative change and would not foster additional emissions reductions. See Appendix D for the full discussion.

161. COMMENT: For Rule 4354, the District should consider lowering the existing SOx limits for container plants, which currently stand at 0.9 and 1.1 lbs of SOx/ton of glass depending on cullet content. District BACT for this category is 0.8 lbs/ton.

RESPONSE: District staff evaluated the potential opportunity to reduce the SOx emissions limit to 0.8 lbs/ton of glass produced and determined that this is not a technologically feasible option. See Appendix D for the full technology evaluation.

162. COMMENT: For Rule 4802, provide a more detailed cost-effectiveness analysis (or citation to analysis) of additional controls, including those required by BAAQMD Rule 9-1.

RESPONSE: The current sulfur emissions limit in Rule 4802 is equivalent to limits in other air districts. According to source tests conducted in 2010 and 2011, the one facility subject to Rule 4802 is already meeting the EPA BACT emissions limit for these units and is equipped with the best available control technology; therefore, amending the rule would not result in reduce emissions. See Appendix D for the full evaluation.

163. COMMENT: For Rule 4103, the District should ensure that the case-by-case analysis of citrus orchard removals described in the June 27, 2011 letter from Seyed Sadredin to Deborah Jordan is being implemented.

RESPONSE: The economic analysis performed in the 2010 Final Staff Report and Recommendations on Agricultural Burning demonstrated that the chipping and hauling of citrus orchard removal material to biomass plants was not an economically feasible alternative to open burning except in the case of very large growers (>3,500 acres). Since July 2011, the largest citrus farms have not been approved to burn citrus orchard removal material. To date, no large citrus farms have submitted applications to burn citrus removal material. Accordingly, no burn permits have been issued for citrus orchard removal material for the largest citrus farms in the Valley.

The District annually evaluates each crop category still allowed to bring and determines a cost threshold based on the economic feasibility of alternatives to burning. Even for those smaller farms without economically feasible alternatives only a small amount of citrus orchard material is actually being burned in the field. It is critical to note that the small amount of burning that did occur was authorized under the Smoke Management System on days where the amount burned would not cause or contribute to an exceedance of any air quality standard.

The economic feasibility of alternatives to burning was reevaluated in May 2012 in the 2012 Update: Recommendations on Agricultural Burning and determined that there has been no significant change to the economic feasibility of chipping and hauling removals since the 2010 Report. The District has committed to reevaluate the appropriate threshold for citrus growers annually.

164. COMMENT: For Rule 4106, Page D-48 suggests chipping and burn boxes through grant programs may be an alternative to burning for communities subject to fire hazard reduction burning. Placer County Air Pollution Control District conducted such a pilot program and estimated significant emission reductions.

RESPONSE: District staff reviewed the literature for the Placer County APCD pilot program and analyzed them for feasibility in the Valley. Refer to the Rule 4106 control measure for in the Stationary and Area Source Control Strategy Evaluation Appendix for this discussion. Staff have determined that there are too many variables to between the Valley and Placer County to commit to a program at this time. However, there is a recommendation for further study of this potential opportunity to determine its feasibility for the Valley. It is again important to note that any prescribed or hazard reduction burning is regulated through the District's Smoke Management System and only allowed on days where the amount burned would not cause or contribute to an exceedance of any air quality standard.

165. COMMENT: For Rule 4204, provide a more detailed cost-effectiveness analysis (or citation to analysis) for additional controls.

RESPONSE: Additional analysis has been included for potential emission reduction opportunities; however, all of the potential opportunities identified were either technologically infeasible or not cost effective. More detailed information has been provided for this source category in Appendix D.

166. COMMENT: For Rule 4550, provide a more detailed cost-effectiveness analysis (or citation to analysis) for additional controls. Also, analyze whether it is appropriate to allow selection of the Conservation Tillage CMP to have greater weight and to fulfill the requirement for CMP selection for multiple cropland categories.

RESPONSE: As discussed in the Stationary and Area Source Control Strategy Evaluation Appendix, the District has adopted the most stringent regulatory requirements in the nation for reducing particulate matter emissions (primarily PM10) from agricultural sources. PM2.5 emissions from these sources make up a minor fraction of 24-hour PM2.5 concentrations in the peak winter season, the geologic nature of these particulate matter emissions are of relative low toxicity. The District does not recommend any additional regulatory requirements under Rule 4550.

With regard to conservation tillage, Rule 4550 does allow and encourages the use of conservation tillage as one of multiple menu-based conservation practices that achieve emissions reductions. Given the inherent potential fuel and other cost-benefits associated with conservation tillage, the San Joaquin Valley has seen an increasing trend in agricultural operations utilizing that practice. Agricultural operations currently employing a broader set of conservation practices are also complying with the requirements of Rule 4550 and are achieving significant emission reductions from the implementation of those practices. The District would not anticipate any additional increase in the use of conservation tillage through the suggested approach as the selection of such practices by agricultural sources involve other critical factors such as economics, cultural practices, and soil type.

167. COMMENT: For Rule 4692, the District should consider adopting a requirement to record the date and time of cleaning and maintenance for the catalyst or other certified control device similar to SCAQMD Rule 1138 (d)(l)(B) to help ensure rule effectiveness.

RESPONSE: The recommendations for regulatory action in the plan identify emission reduction commitments and not amendments for specific rule language. While there will be no recommendation for recordkeeping requirements in the plan, it is one aspect of the rule that will be evaluated during the rule-amending project, and implemented if deemed appropriate at that time.

168. **COMMENT**: For Rule 4692, given the significant emissions from under-fired charbroilers, the District's PM2.5 Plan should include when the joint evaluation with SCAQMD on under-fired charbroilers controls is expected to be completed.

RESPONSE: The South Coast study for under-fired charbroilers is expected to be complete by the end of 2012. See Appendix D for more information regarding this study.

169. **COMMENT:** For Rule 4901, it is agreed that further strengthening of the District's existing successful wood burning device program should be considered.

RESPONSE: Comment noted. See Appendix D for the full emission reduction opportunities discussion and recommendations to further strengthen Rule 4901.

170. **COMMENT:** For Rule 4902, rule exemptions (e.g., for LPG or liquid fuels) should be evaluated to determine whether they are still appropriate.

RESPONSE: The possibility of extending the applicability of Rule 4902 to LPG-fired water heaters was evaluated. However, other California air districts also exempt LPG-fired water heaters from their rules. Refer to Appendix D for additional information.

171. **COMMENT**: For Rule 4902, Southern California Gas Company indicates development of low-NOx burners may achieve < 6ppm NOx for residential water heating. The District should investigate this research effort and include the research in Chapter 7, Technology Advancement, of the PM2.5 Plan as appropriate.

RESPONSE: The District appreciates the information provided by Southern California Gas Company and will continue to work with them during the development of this low-NOx technology. Any additional information on this technology will be included in Chapter 7 as information is provided to the District.

172. **COMMENT:** For Rule 8061, provide a more detailed cost-effectiveness analysis (or citation to analysis) of a lower trip threshold.

RESPONSE: This potential opportunity was evaluated and it was determined that lowering the threshold would not generate additional emissions reductions. The full analysis is included in Appendix D.

173. COMMENT: For SC 005, the District should evaluate whether warm mix asphalt is technically and economically feasible and appropriate for RACM. The review should include the potential of using warm mix asphalt on public and private roads/lands.

RESPONSE: Warm-mix asphalt was researched and it was found that while Caltrans uses warm-mix asphalt technologies for certain projects, use by local jurisdictions has not been well-received. See Appendix D for the full technology evaluation.

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ADDITIONAL STAKEHOLDER COMMENTS

Three comment letters were received during the public comment period following the second public workshop on June 27, 2012.

Dairy Cares (DC)
Kenneth Cannon (Cannon)
Ag Coalition[3] (AC)

174. COMMENT: The average daily ammonia emissions for the Farming Operations category as presented in "Appendix B: Draft Emissions Inventory" of the draft plan are not consistent with cited studies. DC's concern is that the dairy ammonia emissions are overestimated during the winter high-PM2.5 season. The District should share the dairy-specific ammonia emission inventory including both annual average and winter average day inventories and relevant diurnal/seasonal/monthly source profiles used in developing the inventory and used in attainment modeling. (DC)

RESPONSE: The updated draft inventory has incorporated controls from Rule 4570 (Confined Animal Facilities) and shows a decrease in ammonia emissions due to the implementation of Rule 4570. The District will continue to evaluate the latest research to further understand the seasonal and diurnal factors for ammonia emissions from agricultural operations.

175. COMMENT: The emissions reductions achieved through the replacement and control of engines used for irrigation pumping purposes, tractors, forklifts, harvesters and trucks through District incentive programs should be quantified and accounted for accurately in this plan. The discussion surrounding the development of the Memorandum of Understanding (MOU) between EPA, USDA, State and local Air Pollution Control Districts, including CARB and the SJVAPCD, must be highlighted. This MOU would provide a formal mechanism by which to quantify and account for these types of real emission reductions. (AC)

RESPONSE: The District concurs and appreciates the highlighting of this significant agreement. A Statement of Principles was developed in 2010 that established a general framework for ensuring that reductions in air emissions

[3] The following groups are represented in the Ag Coalition (AC) comment letter: African American Farmers Association of California, Air Coalition Team, Allied Grape Growers, California Blueberry Association, California Citrus Mutual, California Cotton Ginners Association, California Cotton Growers Association, California Farm Bureau Federation, California Grape and Tree Fruit League, Fresno County Farm Bureau, Kings County Farm Bureau, Kern County Farm Bureau, Madera County Farm Bureau, Merced County Farm Bureau, Milk Producers Council of California, National Hmong American Farmers, Nisei Farmers League, Olive Growers Council, Raisin Bargaining Association, San Joaquin Farm Bureau Federation, San Joaquin Valley Association of Certified Air Permitting Professionals, Stanislaus County Farm Bureau, Tulare County Farm Bureau, Tulare Lake Drainage District, Tulare Lake Resource Conservation District, Tulare Lake Water Basin Storage District, Western Agricultural Processors Association, and Western Growers Association.

resulting from voluntary incentives to replace off-road agricultural equipment received credit in the SIP. The MOU states that the District, NRCS, ARB and EPA will work collaboratively to develop a mechanism to provide SIP credit for emissions from incentive programs that are surplus, quantifiable, enforceable, and permanent. Additionally, in July 2012, EPA and USDA agreed to specifically implement this concept to ensure that emissions reductions from incentive programs were given their proper credit in the SIP context. As explained in Chapter 6, the District will be seeking to adopt a rule that establishes the framework for this to occur.

176. COMMENT: The significant emission reductions created by the implementation of the USDA Natural Resources Conservation Service (NRCS) Environmental Quality Incentive Program (EQIP) and Conservation Innovation Grant Program (CIGb) should be quantified. The current information does not provide enough details and does not capture all of the emission reduction projects being funded by NRCS. (AC)

RESPONSE: The District has worked with NRCS to identify a fuller breadth of their programs, and has incorporated that information into the Mobile Source Control Strategies Appendix and the introduction to Combustion Devices in the Stationary and Area Source Control Strategy Evaluation Appendix. Refer to those appendices for more details. As described in the preceding comment, the District recognizes the importance of quantifying and providing credit for emissions reductions achieved under the NRCS and District incentive programs.

177. COMMENT: The agricultural industry remains seriously concerned with the purported increase in directly emitted PM2.5 emissions as set forth on page B-6. As stated previously, and acknowledged by both the Air District and the ARB, this is in direct conflict with a previously accepted annual acreage reduction in the San Joaquin Valley of 0.30 percent. (AC)

RESPONSE: The emission inventory has been updated. Refer to the response to Comment 138.

178. COMMENT: The District should provide a reference for the estimated 99.9% efficiency for the PTFE bags, in Section D.7.6 Almond Hulling and Shelling Operations, as well as D.7.7 Pistachio Hulling/Shelling Operations. (AC)

RESPONSE: The reference has been added to Appendix D. Refer to the response to Comment 136.

179. COMMENT: Current District policy requires that sources maintain an extra 10% bag supply on hand for hulling and shelling operations. Therefore, the District must increase its estimated bag cost for the cost analysis by 10%. (AC)

RESPONSE: The referenced permit condition has been taken into account and the cost effectiveness has been updated. Refer to the response to Comment 137.

180. COMMENT: Eliminating leaf blowers, gas lawn mowers, and drive through fast food restaurants and banks would help Valley air pollution problems. (Cannon)

RESPONSE: Options to address emissions from lawn care equipment have been evaluated. Refer to Appendix D for more details about this evaluation. Also, the District's Healthy Air Living program provides information on what Valley residents can do to help clean up the air, including avoiding idling at fast food restaurants and banks.

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SUMMARY OF SIGNIFICANT COMMENTS FOR THE APRIL DRAFT PM2.5 PLAN

VERBAL COMMENTS, APRIL 30, 2012 WORKSHOP

Approximately 18 people (non-District, non-ARB) in attendance (9 Fresno, 7 Bakersfield, 2 Modesto)

BGC Environmental Brokerage Services (BGC)
California Cotton Ginners and Growers Association (CCGGA)
Central Valley Air Quality Coalition (CVAQ)
Coalition for Clean Air (CCA)
Shipp, Evan (Shipp)
Evolution Markets, Inc. (EM)
Fresno Metro Ministry (FMM)
Southern California Gas Company (SCGC)
Krazan and Associates (KA)

181. **COMMENT:** Will the PM2.5 plan address the offset ratio for inter-pollutant trading using SOx emission reduction credits (ERCs) to offset PM2.5 and if so, will the proposed ratio be different than 40:1 ratio set by EPA? (EM)

RESPONSE: The District and ARB are in the process of conducting the modeling and other analysis necessary to document appropriate interpollutant trading ratios for the Valley for both NOx to PM2.5 and SOx to PM2.5. These ratios would replace EPA defaults for the Valley. This analysis will be available in future plan drafts.

182. **COMMENT:** Are any reductions to existing inter-pollutant ERC holdings anticipated to meet objectives of the PM2.5 plan? Is there a timeline proposed for labeling PM10 ERCs in the ERC registry as PM2.5 vs. PM10? (BGC)

RESPONSE: ERCs will be addressed in future plan drafts. At this time, the District does not expect to retire any existing ERC holdings as a part of the attainment planning effort. The District does not plan to identify the percentage of PM10 ERCs that are PM2.5. For purposes of the plan, we intend to conservatively consider all PM10 ERCs to be PM2.5.

183. **COMMENT:** PM2.5 trends over the last five years appear to be flat. The weight of evidence analysis should include an examination of trends among more recent years, including meteorologically-adjusted trends and species trends. (Shipp)

RESPONSE: Appendix A includes an extensive discussion of PM2.5 trends since 1999, when PM2.5 monitoring began. This analysis considers both long term trends as well as more recent patterns. This analysis will be expanded in future drafts. This will include meteorologically adjusted PM2.5 trends and speciated trends that are currently being evaluated by the District and ARB.

184. COMMENT: Do the PM2.5 species pie charts on slides 16-17 represent one day with a high PM2.5 concentration? If so, which day? (FMM)

RESPONSE: The PM2.5 species pie charts represent an average among days in Fresno and Bakersfield with high PM2.5 concentrations. They are not tied to any particular day.

185. COMMENT: Ammonium nitrate trends for Bakersfield and Fresno were presented. What is the difference between Bakersfield and Fresno in regards to NOx and ammonia emissions? (FMM)

RESPONSE: A monitor can be impacted by emissions from outside its county, and down-wind missions in its county may not affect the monitor at all. As such, rather than focus on county emissions, the District's receptor modeling (also known as linear rollback) will evaluate emissions that occur in an area of influence near that monitor. This analysis (to be included in a future draft) will corroborate photochemical modeling to determine the contribution of ammonium nitrate in future years as well as the magnitude and types of emissions that are driving that contribution.

186. COMMENT: In regards to the rule effectiveness evidence presented for the Rule 4901 (Wood Burning Fireplaces and Wood Burning Heaters), what was the contribution from agricultural burning and how can you tell if emissions are coming from fireplaces versus agricultural open burning? (FMM)

RESPONSE: Since agricultural burning is minimal during the winter in the San Joaquin Valley, the improvement in PM2.5 concentrations shown through the Rule 4901 effectiveness analysis is mostly attributable to residential wood-burning.

187. COMMENT: Will the 1-hour ozone plan be prepared concurrently? What is the timeline for the 1-hour ozone plan? (CCA)

RESPONSE: The 1-hour ozone plan will not be prepared concurrently with the *2012 PM2.5 Plan*. There is currently not a timeline for a 1-hour ozone plan.

188. **COMMENT:** Please describe why July 4 - 5, 2007 would be considered an exceptional event, as described on page A-9. (CCA)
RESPONSE: Federal regulations (40 CFR 50.14(b)(2) indicates that fireworks displays qualify as an "exceptional event" and, with EPA concurrence of local or state documentation, are not used in design value calculations.

189. **COMMENT:** How will incentive programs be utilized as control strategies, as stated on Slide 44? (CCA)

RESPONSE: As noted in the Chapter 5 summary, incentive programs are an integral part of the emission reduction efforts of the District. The District is thoroughly evaluating potential control measure opportunities for technological feasibility, reasonably available control technology, cost effectiveness, relevance to attainment, and opportunities for improved public health. Based on this analysis, the District will determine which type of strategy, if any, is most appropriate for each control measure opportunity. These control strategies options will include regulations, incentive programs, and other approaches.

190. **COMMENT:** Does the emissions inventory for farming operations include the latest information from recent research studies? This includes the cotton gin study, the almond study, and the new emission factors that resulted from the MRI study for the off road dust. (CCGGA)

RESPONSE: The draft emissions inventory is based on information that was available to ARB staff as of December 2011. It does not yet include the results of the cotton gin or the almond studies. ARB plans to include the revised almond emission factors in the final inventory. The cotton gin study is not yet completed. The District recognizes the value of these and other related studies, and will work to ensure that they are used as appropriate to enhance the emission inventory.

The unpaved road dust emission estimates reflect an emission factor derived from recent Western Regional Air Partnership (WRAP) studies, which include the MRI study cited by the commenter. ARB uses a 10% PM2.5/PM10 size fraction, which is the same fraction used in the U.S. EPA's AP-42 emission factor equation for unpaved roads.

191. **COMMENT:** Are reductions from incentive programs included in the inventory for farming equipment? (CCGGA)

RESPONSE: The farm equipment inventory is based on ARB's OFFROAD2007 model, and it does not include reductions from incentive programs. ARB is working with a group of agricultural stakeholders and District staff to determine how best to reflect incentive programs in the SIP.

192. **COMMENT:** The inventory for farming operations listed on page B-5 states that directly emitted emissions are increasing, which seems to be contrary to other sources of information and should be reviewed. (CCGGA)

RESPONSE: The draft PM2.5 emission estimates presented for the April public workshop for farming operations were based on projections derived from harvested crop acreage for the years 1999 to 2010, as reported by the county agricultural commissioners to the USDA's National Agricultural Statistics Service.

District staff has worked with ARB to review the data from both sources and has come to the agreement that the data from the FMMP is more accurate and appropriate for the Valley. As such, the emission inventory will be updated as appropriate

193. **COMMENT:** Our company has developed an apparatus that could reduce emissions from open hearth fireplaces. As previously discussed with the District Staff, the project does not fit within the categories needed to qualify for funding under the Technology Advancement Program (TAP). We ask that you expand the TAP categories to include retrofits of fireplaces so that our device fits into your rule. (KA)

RESPONSE: District Rule 4901 (Wood Burning Fireplaces and Wood Burning Heaters) does not require or prohibit specific technologies be installed, only that those technologies meet EPA certification requirements. The District will consider revising its TAP categories to include fireplace retrofits.

194. **COMMENT:** Clarify the use of long-term trends versus short term trends. (CVAQ)

RESPONSE: Meteorology fluctuates from year to year, and this can cause -to-year variation in PM2.5 concentrations due to meteorology. Longer trends can smooth out these fluctuations and provide a better perspective on the overall progress. Trends relating to the "cleanest winter on record," for example, are long-term trends based on all available data. Shorter term trends can help you understand the impacts of recent weather patterns or recent emissions reductions efforts.

195. **COMMENT:** What are the key components in the formation of nitric acid? (CVAQ)

RESPONSE: Nitrogen dioxide (NO2) reacts with OH in the atmosphere to form nitric acid (HNO3). This requires the formation of OH radicals from hydrocarbon gases by interaction with NO in photochemical action during the day.

Nitric acid can also form when nitrogen dioxide (NO2) reacts with the nitrate radical (NO3) in the presence of atmospheric water (H2O). This happens at night when NO2 reacts with ozone (which was formed during the day for surface level ozone) to form the NO3 radical.

Both pathways involve photochemical action. The night reaction is not as obviously from photochemistry, but if the ozone (near the surface) was not formed in the day by photochemistry, it would not be available at night for the alternative nitric acid formation pathway.

196. COMMENT: When will VOCs and ammonia be added to the inventory? (CVAQ)

RESPONSE: VOCs and ammonia inventories will be included in the next draft plan.

197. COMMENT: Distribution centers have zero idling rules imposed on them. Can incentive funding be used for electrification at distribution centers under the ARB Idling Rule? These operations should be viewed as stationary sources and not mobile sources. (CVAQ)

RESPONSE: The District reminded the commenter that ARB has already adopted an anti-idling regulation that already prohibits idling from trucks, including at distribution centers (California Health and Safety Code Section 2485). Prior to this regulation, the District funded a number of projects providing idling alternatives. However, since idling is now prohibited, such reductions would not be surplus and incentives are not available. The District also informed the commenter of restrictions on the District's authority to regulate interstate commerce and mobile sources.

198. COMMENT: What PM2.5 AQI scale was used in the AQI analysis within Appendix A? Was it a District defined scale, or the official scale from EPA? (CVAQ)

RESPONSE: The current and official EPA PM2.5 AQI scale was used in the AQI analysis within Appendix A.

199. COMMENT: What is the difference in the annual versus winter time emissions inventory? (SCGC)

RESPONSE: The annual emissions inventory represents the average daily emissions for the entire calendar year. The winter emissions inventory represents the average daily emissions for November through April.

200. **COMMENT:** What is the commending procedure for this plan? Are there 45-day comment periods, or 30-day? (SCGC)

RESPONSE: Comments received by 5:00 PM on May 14, 2012 will be presented in the next draft of the plan as appropriate. Comments received after this time will be presented in later drafts of the plan. Stakeholders are encouraged to provide comments whenever possible for evaluation and incorporation into the plan as appropriate.

The District generally provides a two week comment period after public workshops for stakeholders to submit comments that will be incorporated into the next draft of a staff report or plan document. However, there is no governing body or regulation that requires this timeline.

The 30-day period is a public noticing requirement pursuant to California Health and Safety Code Section 40725. This is not a public commenting requirement, rather it is a requirement that a notice of the time and place of a public hearing to adopt, amend, or repeal any rule or regulation shall be given not less than 30 days prior to thereto. Subpart (c) of this section of the health and safety code requires that the notice invite written public comment, but does not require a specific comment time period.

The 45-day period is a public noticing requirement for the Air Resources Board (ARB), not the San Joaquin Valley Air Pollution Control District. The 45-day public noticing requirement is related to public hearings at ARB for the adoption, amendment, or repeal of a regulation. For more information about this refer to the California Government Code 11346.4.

201. **COMMENT:** The District should consider having technical workgroup meetings with the District in addition to the scheduled public workshops. There are concerns that the timeline for this plan does not allow sufficient time for public involvement. (SCGC)

RESPONSE: The District welcomes public participation, including technical input, throughout this public process and encourages stakeholders to submit information to us for consideration and review while drafting this plan. The District has been actively involved in a modeling technical workgroup that includes technical staff from ARB and EPA, and researchers with expertise in PM2.5. The District and ARB hosted a public technical symposium on April 27th that included panel presentations on a range of technical issues relevant to development of the *2012 PM2.5 Plan*. In addition to the April workshop, the District anticipates holding additional workshops in June and August. The plan would be considered by the Governing Board at a public hearing October 2012 after multiple opportunities for public input.

202. COMMENT: What is the Clean Air Vision document, and when will it be available to the public? (SCGC)

RESPONSE: The *Vision for Clean Air: 2012 to 2050* is an interagency policy collaboration will outlining a common ARB, South Coast, and Valley vision for strategies to meet federal air quality standards for ozone and PM2.5, the State's greenhouse gas goals, and reduced public exposure to toxics (such as diesel particulates). Meeting these long-term goals will depend on introduction and deployment of transformative measures and emerging technologies, including zero-emissions goods movement. Thus, the *Vision* document will evaluate potential policies, legislation, infrastructure, and efficiencies that might provide the groundwork for ensuring that South Coast, the Valley, and California as a whole are prepared to meet the demands of long-term goals. This is to be the starting point for identifying actions that need to begin in the short-term. These actions can also contribute to the more near-term air quality needs – including the *2012 PM2.5 Plan* – as well. ARB anticipates taking this document to their Board in June 2012. The document will be posted for public review before this meeting.

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WRITTEN COMMENTS, APRIL 30, 2012 WORKSHOP

One comment letter was received during the public comment period following the first public workshop on April 30, 2012. This comment letter was submitted by the following stakeholders, and for purposes of this plan will be referred to as the "Ag Coalition" (AC)[4].

203. **COMMENT:** The agricultural industry has made huge strides in the past few years in reducing emissions of NOx and PM2.5 through the replacement and control of engines used for irrigation pumping, tractors, forklifts, harvesters and trucks. These emissions must be quantified and accounted for in this plan. There is currently an effort to formalize this concept in the form of a Memorandum of Understanding (MOU) and would provide a formal mechanism by which to quantify and account for these emission reductions. The emissions inventory should also be updated with the emission reductions resulting from the implementation of the USDA NRCS Environmental Quality Incentive Program (EQIP) and Conservation Innovation Grant Program (CIGb). (AC)

RESPONSE: Please refer to the response to Comment 191.

204. **COMMENT:** The District's draft emissions inventory shows an increase in directly emitted PM2.5 emissions from farming operations which utilizes data derived from County Ag Commissioners reports that are based upon "harvested" acreage. This is in direct conflict with a previously accepted annual acreage reduction from the California Department of Conservation Farmland Mapping and Monitoring Program (FMMP). The FMMP data is based on actual planted acreage which more accurately reflects true agricultural land use for emissions inventory planning purposes. We urge the District to work with the Air Resources Board to rectify the emissions inventory for agricultural sources, and demonstrate the actual reduction in agricultural land. (AC)

RESPONSE: Please refer to the response to Comment 192.

205. **COMMENT:** Significant research on PM2.5 emissions from agricultural sources should be incorporated wherever and whenever possible. This includes research that has been conducted on cotton gin emissions under the USDA Agricultural Research Service's (ARS) multi-year study known as "Characterization of Cotton Gin Particulate Matter Emissions." While the sampling phase is over, data analysis

[4] The following groups are represented in the AC comment letter: Air Coalition Team, Allied Grape Growers, California African American Farmers Association, California Blueberry Association, California Citrus Mutual, California Cotton Ginners Association, California Cotton Growers Association, California Grape and Tree Fruit League, California Farm Bureau Federation, Fresno County Farm Bureau, Kings County Farm Bureau, Madera County Farm Bureau, Merced County Farm Bureau, Milk Producers Council of California, Nisei Farmers League, San Joaquin Farm Bureau Federation, Stanislaus County Farm Bureau, Tulare County Farm Bureau, Tulare Lake Basin Water Storage District, Tulare Lake Drainage District, Tulare Lake Resource Conservation District, and Western Agricultural Processors Association.

is also nearing completion and preliminary data is forthcoming, which indicate that PM2.5 emissions from a cotton gin would be insignificant. Furthermore, there has been significant work in almond harvesting operations which report PM2.5 emissions to be an insignificant portion of total suspended particulate (TSP) emissions. (AC)

RESPONSE: Please refer to the response to Comment 190.

206. COMMENT: For purposes of focusing emissions on sources that operate during the "winter time" (November through April), the current characterization can be misleading and causes sources to be regulated that may not impact the current exceedances of the PM2.5 ambient air quality standard. The SIP should clearly identify the actual seasonal variances since seasonal, episodic, regional measures and incentive funding can strategically target limited resources for optimum air quality benefits throughout the Valley. (AC)

RESPONSE: Through the Risk-based Strategy, the District places an emphasis on winter time emissions in the emission reduction efforts presented in this plan because they are most impactful on achieving attainment of the federal air quality standards. However, the Risk-based Strategy has additional components to consider (such as toxicity of pollutants) and therefore the District is seeking to reduce all emissions in the Valley as expeditiously as practicable to benefit the health of its residents. Please refer to chapter two of the plan for a more detailed discussion about the Risk-based Strategy.

207. COMMENT: There is one technical error that needs to be corrected in the 3rd paragraph on page C-22 where the District indicates that new tractor equipment can be up to 25% of the existing tractor's horsepower to be eligible. That should be up to "125%". (AC)

RESPONSE: The technical error will be corrected in the next draft of the plan.

208. COMMENT: The District should expand the discussion regarding the contribution of PM 2.5 from gross polluting vehicles and direct resources towards gross polluting on-road vehicles, and towards enforcement ensuring that all vehicles are registered in the District. After all, vehicle registration fees are a major source of incentive funding for the Valley Air Basin. (AC)

RESPONSE: The District intends to expand discussions regarding mobile sources throughout the public process of the development of this plan. Refer to Appendix C for more details and updated language throughout the process.

WRITTEN COMMENTS, AFTER APRIL 30, 2012 WORKSHOP DEADLINE

One public comment letter was submitted to the District after the public comment period concluded.

Southern California Gas Company (SCGC)

209. COMMENT: California's innovative and robust energy-efficiency programs have resulted in a 24% reduction of natural gas use per customer since 1990. We would like to work with the District and CARB to ensure the PM2.5 Plan accurately reflects the energy-efficiency savings and the proper natural-gas usage forecasts. (SCGC)

RESPONSE: Chapter 7 of the *2012 PM2.5 Plan* will be the chapter that discusses the energy efficiency strategies generally as potential policy initiatives and innovative opportunities. In any future work to refine innovative strategies regarding usage forecasts, the District will work with stakeholders to determine the most accurate and reliable usage forecasts. The District looks forward to receiving submittal of data to assist us with this process.

210. COMMENT: We would like to discuss the advances and potentials for natural-gas technology, especially for natural-gas vehicles, to ensure that the natural-gas vehicle-penetration rates and associated emissions benefits are accurately reflected in the PM2.5 Plan. (SCGC)

RESPONSE: The District appreciates and looks forward for the opportunity to discuss advances and potential in natural gas technology. Incentive strategies and technology advancement are important components to the District's attainment strategy. The *2012 PM2.5 Plan* addresses mobile sources in Appendix C. Refer to that appendix current for discussions regarding advances for mobile sources.