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Joint Comments from MCCV & CLFP * Rule 4206

Technical, Logistical & Economic Considerations
Proposed Alternatives
January 14, 2008

Mr. Seyed Sadredin
Air Pollution Control Officer
San Joaquin Valley Air Pollution Control District
1990 East Gettysburg Avenue
Fresno, CA 93726

Dear Seyed:

The Manufacturers Council of the Central Valley (MCCV) and California League of Food Processors (CLFP) appreciated the opportunity to meet with you on December 17, 2007 to discuss industry concerns regarding the District's proposed revisions to Rule 4306. To follow-up on that discussion we have prepared a summary of the technical, logistical, and economic issues associated with the compliance schedule and limits set forth in the proposed rule. We believe these issues are of a sufficient magnitude to necessitate the District amending several provisions of the proposed rule. We have developed an alternative proposal for your consideration that we believe will address some of industry's concerns and also provide timely and meaningful emissions reductions as we press on toward continuous improvement in the Valley's air quality.

Please note that the comments and proposed alternatives contained in this letter were developed without the benefit of the data requested from the district. (CLFP filed an extensive Public Records Request on Nov. 9, 2007.) Once that information is received, we may present different scenarios and some of what we have proposed may be rendered infeasible. Nonetheless, we are presenting to you our best proposal based on the limited data we have been able to gather.

The following sections outline our issues and our proposed alternatives as they relate to the food processing and manufacturing industries.

I. Potential Technical Barriers to a Uniform Boiler 5 ppmv NOx Emissions Limit

MCCV and CLFP have identified a number of technical issues associated with the District's proposed NOx 5 ppmv emissions limit:

- **Attaining Compliance with Ultra Low NOx Burners**
  A NOx emissions limit of 5 ppmv cannot be achieved by ultra low-NOx burners for most applications. Although there may be a few isolated cases where ultra low-NOx industrial boilers have achieved 5 ppmv under certain site-specific conditions, those

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tend to be unique situations in new installations with very specific operating parameters. In the 2007 Ozone Plan, the analysis prepared by the District's staff regarding further revisions to the large boiler rule concluded that ultra low NOx burners alone are "*not technologically capable of achieving 6 ppmv*." The District has yet to disprove this statement or demonstrate that ultra low NOx burners can consistently achieve the proposed level of 5 ppmv under a wide range of actual operating conditions and across the diverse range of boiler and burner configurations.

As we noted in our comments in 2003 and 2005 the ultra low NOx burners are also very sensitive to fluctuating system demand and don't always handle changes in load and demand in a safe manner. This has proven to be the case as more firms have installed 9 ppmv units and found that even slight variations in load create significant operating difficulties ranging from loss of product to boiler explosions. Furthermore, these units are less efficient to operate in those situations where there is a variable load. To compensate for the limited ability of the burners to turn down or ramp up the units are operated at high fire with the excess steam pressure vented. This is a waste of fuel and steam resources and results in increased emissions, but appears to be the only way to manage the unpredictable nature of ultra low NOx burners in variable load situations.

It is important to note that most firms recognize that--to ensure they can safely meet their permit conditions--their boilers must be capable of consistently maintaining an emissions level *lower* than their permit limit and the District standard. So, in practical terms, ultra low-NOx units must be capable of achieving a level ***less*** than 5 ppmv, and we are not aware of any vendors claiming this is feasible. In fact, we know that the District has received letters from at least three burner manufacturers attesting to this fact.

R.F. MacDonald Company recently submitted comments to the District[1] stating that ultra low-NOx burners are not capable of maintaining 5 ppmv or anything lower. We believe that most, or possibly all, other equipment suppliers have reached the same conclusion and will not provide guarantees that their ultra low-NOx units can meet the proposed new emissions level, particularly if there is any variance in load.

- **Compliance with Selective Catalytic Reduction (SCR)**
  Due to the limits of ultra low-NOx burner technology, the only way for most firms to consistently achieve NOx emissions limits below 9 ppmv for a wide range of operating conditions and load variances is to install SCR equipment. This has been confirmed by two equipment suppliers, R.F. MacDonald Company and URS.[2]

  The capabilities of a specific SCR unit at a specific site will vary based on the system load, design characteristics, operating conditions, controls, and other factors. It may not be a given that adding SCR retrofits will result in all boilers attaining 5 ppmv, and we believe that it would be problematic to base new regulatory standards on that assumption.

  In his letter to the District, Steven Bortz of URS notes that SCR technology is most effective when used in conjunction with large boilers that have very limited load

[1] November 13, 2007 letter from Michael MacDonald, R.F. MacDonald Co., to Manuel Salinas, SJVAPCD
[2] Comments submitted to SJVAPCD on November 15, 2007 by Steven Bortz, URS.

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swings, and when load changes do occur they happen at a relatively slow pace. For example, Bortz notes that SCR units installed at large electricity generating plants have been successful.

However, unlike power plants, food processors and other manufacturers have a wide range of boiler sizes and load characteristics. Some boilers are used to provide base-load capacity and have relatively steady operating conditions. In other cases the system must be able to cope with frequent and relatively large load swings. SCR is a challenging technology, and requires integration into the boiler system with sophisticated controls to operate efficiently and consistently over the full range of the boiler load. Manufacturers cannot just add the system to a boiler and expect it to automatically meet their needs and the District permit conditions.

There are technical issues associated with ammonia injection systems and controls used with SCR units that should be considered. As noted by Steven Bortz of URS, there are difficulties associated with maintaining NOx control and ammonia slip in cases where there is a wide turndown range or if there are rapid load swings. R.F. MacDonald noted in their comments that ammonia slip is difficult to manage and expensive to measure and that affordable portable analyzers are not available.

The District has long pursued a strategy of implementing "technology forcing" regulations. However, we have reached, or will soon approach, the point of diminishing returns with respect to effective NOx emissions reductions. As will be discussed in the following sections, the proposed rule may have entirely unintended consequences and yield very limited reductions in emissions.

II. Logistical Barriers to Implementation of the Proposed Rule

There are several important logistical concerns that should be considered by the District:

- **Physical Constraints**
  As mentioned by R.F. MacDonald in their letter to the District, SCR units require an ammonia injection grid, extensive duct systems, the catalyst, and an air dilution assembly. Due to space limits or plant configuration some facilities may not be able to fit all of this equipment into the existing boiler room, necessitating construction of additional facilities. In some cases extra space may not be available. This is also why it is incorrect to assume that those facilities that have installed SCR units can readily expand their systems to meet lower emission limits.

- **Ammonia Use**
  There are numerous logistical challenges, environmental concerns, and risks associated with handling and storing ammonia. If SCR is to become the standard NOx control technology, numerous trucks will be hauling ammonia to hundreds of manufacturing sites located across the Valley which will generate emissions of criteria pollutants and greenhouse gasses offsetting some of the gains associated with SCR technology. With the additional production, movement, and storage of ammonia the potential for an accidental spill will increase, posing a risk to air quality and public health and add to greenhouse gas emissions. These concerns, along with others raised previously, call into question the net environmental benefit of SCR technology given the limited amount of emissions reductions at stake.

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- **Prohibitive Regulatory Mandates**
  Due to toxic release concerns or zoning limits some facilities located in or near urban areas may be prohibited from having significant amounts of ammonia on-site. Other firms will have to install special storage areas for the material, train workers to handle ammonia, provide safety equipment, and incur extra liability exposure and insurance costs. Further, the facilities may be subject to Department of Homeland Security anti-terrorism toxic materials reporting requirements and file risk management plans and reports to local governments. All of these issues add to the cost of SCR systems and should be given due consideration in the rulemaking process.

- **Subpart Db boilers**
  For seasonal facilities with EPA Subpart Db boilers who are operating with an EPA Alternative Monitoring System (AMS), moving to SCR eliminates their capability to use the AMS and would necessitate a Continuous Emissions Monitoring System (CEMS) or the development of a new advanced parametric monitoring system. This is a permitting and logistical issue, as it is very time consuming to obtain approval from US EPA to use a predictive or parametric system, though EPA has concurred that the use of CEMS is not reasonable for these seasonal units.

- **Greenhouse Gas Implications**
  We are concerned that several factors associated with SCR technology will increase greenhouse gas emissions. These include the increased production, transportation, storage, and use of ammonia; and increased energy consumption for fans: all of which will add to a facility's greenhouse gas footprint.

III. Compliance with 5 ppmv Standard is Cost Prohibitive for Many Facilities.
The rapidity of change in NOx emissions regulations for large boilers has been exceptional, and is a point of real concern to the business community. The District initiated new emissions requirements for large boilers with the adoption of Rule 4306 in September, 2003. Rule 4306 was amended in March, 2005, less than two years after the first regulations. Again, less than two years later, the District proposed in its April, 2007 Ozone Plan to tighten the NOx emissions standards, and that proposal was the genesis for the amendments now under consideration. Adopting or proposing three new sets of rules within a four year period is an extraordinarily aggressive approach to regulating this source category that accounts for a small portion of the District's total NOx inventory.

The 2005 District rulemaking was an important decision point for many food processors and manufacturers. Depending on the type of boiler used and the compliance path chosen, firms had two to three years to conform with the NOx emissions limits. Firms had to evaluate their options and costs carefully and make significant investment decisions. The decision to install ultra low NOx boilers was made by many companies in the belief that switching to the new technology would fully satisfy their regulatory obligations for many years. Some of the retrofits and replacements have only recently been completed and a few are not yet underway. *At no point did the District indicate that, in less than three years, the Rule might be significantly altered again. Had the District clearly signaled that intention in 2005 many firms clearly would have made different decisions that would have proven much less costly in the long-run.* As a result, some companies fear that any investments made to comply with the proposed rule may be rendered useless in just a few years if the District lowers the emissions standard again due to new or different federal standards or the emergence of a new technology.

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- **Actual Compliance Costs: 2005 Rule With ULN Units**
  In 2005 MCCV and CLFP estimated that the cost of complying with a 9 ppmv limit with Ultra Low NOx units would be about $42,600 per ton of NOx. The District estimated that the costs would be much lower, within the 2005 cost effectiveness threshold of $9,700 per ton. The table below summarizes the actual costs incurred by three firms to install ultra low NOx burners during the 2005 – 2006 time frame.

Table 1. *Actual* ULN Retrofit Costs Incurred at Food Processing Facilities

Site Code#	Boiler #	Boiler Size (MM Btu/hr)	Year of SCR Retrofit	Total SCR Installation Cost ($)	Annual Operating Cost ($)	Total NOx Reduction Tons/yr	**Cost Effectiveness $/ton**
1	1	22	2005	130,503	47,200	2.13	**28,301**
2	3	96	2005	220,000	52,499	3.77	**23,355**
	6	181	2006	400,000	157,939	5.47	**40,695**
	5	96	2006	317,000	45,227	2.90	**33,269**
	1	73	2007	320,000	44,579	2.21	**43,677**
3A	1	266	2007	456,650	126,914	7.64	**59,758**
3A	2	180	2006	155,827	87,311	5.17	**30,135**
3A	5	36	2007	168,768	95,618	1.82	**92,830**
3B	2	120	2007	284,039	170,546	3.45	**62,819**
3B	3	120	2006	349,578	159,205	3.45	**62,609**
			Average Cost/Ton Incurred				***$47,745***

The average cost of retrofitting these 10 boilers was $47,745, which was higher than the MCCV/CLFP 2005 estimate, and far above the District's cost effectiveness threshold. We believe that these figures support our contention regarding the potential high costs of retrofits and concern with the costs of requiring SCR units. Additionally, because the actual costs of compliance are consistently and considerably higher than the district's estimates during rule development, we would like to request that this be considered in the socio-economic analysis.

- **Estimated Rule Compliance Costs**
  MCCV and CLFP collected data from several processors to estimate the cost of compliance for the current proposal. The data collected falls into two categories; actual SCR retrofit costs from firms that have added those systems in the last two years, and estimated SCR retrofit costs from firms that either installed ultra low-NOx burners in the last two years or have not installed any retrofits due to their load following designation. The following tables summarize the data collected.

  It is important to note that SCR retrofit costs will vary widely based on the size of the boiler and a number of other factors, including the control technology and emissions monitoring system. This is demonstrated in the tables on the following page.

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Table 2. *Actual* SCR Retrofit Costs Incurred at Food Processing Facilities

Site Code#	Boiler #	Boiler Size (MM Btu/hr)	Year of SCR Retrofit	Total SCR Installation Cost ($)	Annual Operating Cost ($)	Total NOx Reduction Tons/yr	**Cost Effectiveness $/ton**
1	3	155	2007	435,000	94,700	2.48	**66,488**
2	3	182	2006	665,215	38,000	6.54	**22,283**
3	2	62	2006	310,900[3]	12,750	1.43	**44,069**
	4	90	2006	310,900	12,650	2.81	**22,441**
	5	99	2006	310,900	12,850	2.61	**24,187**
	6	95	2006	310,900	12,750	2.74	**23,068**
4	3 total[4]	95, 95, 184	2006 (all 3)	1,515,000 (for all 3)	75,000 (all 3)	17.83 (all 3)	**66,706**

Table 3. *Projected* SCR Retrofit Costs at Food Processing Facilities

Site Code#	Boiler #	Boiler Size (MM Btu/hr)	Estimated Total SCR Installation Cost ($)	Annual Operating Cost ($)	Total NOx Reduction Tons/yr	**Cost Effectiveness $/ton**
1	1	72	631,300	35,200	0.98	**140,649**
2	3	96	341,000	94,000	3.77	**39,545**
	6	181	401,000	100,000	5.47	**30,139**
	5	96	341,000	30,000	2.90	**48,309**
	1	73	341,000	30,000	2.21	**63,529**
3	1	22	135,000	54,968	2.13	**32,161**
	2	63	350,000	54,800	0.46	**196,401**
4	1A[5]	260	450,000	368,375[6]	1.44	**307,466**[6]
	2A	180	300,000	248,184	0.99	**298,696**
	5A	220	350,000	273,670	1.21	**272,044**
	1B	130	350,000	159,205	0.72	**300,872**
	2B	120	350,000	180,028	0.66	**357,380**
	3B	118.5	350,000	159,205	0.65	**330,070**
	4B	205	450,000	284,920	1.13	**316,207**
	5B	91	300,000	117,361	0.50	**330,390**
5	1	25.1	150,000	4,380	0.53	**54,349**
	2	25.1	150,000	4,380	0.53	**54,349**
	3	25.1	150,000	4,380	0.53	**54,349**
	4	30	200,000	6,570	0.63	**61,787**
	5	50.4	225,000	7,665	1.06	**41,633**

[3] facility divided total SCR site installation costs for the entire project equally among the four boilers
[4] Note: the facility provided SCR retrofit installation costs for the entire project divided equally among the three boilers
[5] Letters denote plants A and B
[6] Includes a cost estimate for steam loss for all of their boilers

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As indicated in the previous tables, the cost effectiveness for installed SCR units ranges from about $22,000 to $66,000 per ton of NOx removed, several times higher than the cost effectiveness threshold of $9,700 per ton in effect in 2005. As stated earlier, this number will rise considerably when moving from the current permit limits down to 5 or 6 ppmv. In most cases the value is well above the District is proposed new cost effectiveness threshold of $24,500 per ton.

The figures in the tables reflect the fact that stationary boilers have been a controlled emissions source for many years, and the potential reductions in emissions per unit are not large. The District projects that the proposed amendments will yield a 40 percent reduction in total NOx emissions from the 770 units affected, equivalent to about 8.85 tons per day. These estimates are based on the NOx permit level at each of these facilities, not on source tests, actual fuel consumption, and boiler usage patterns. Our members as a general rule do not operate their boilers at 100 percent of capacity for their entire permitted operating period. Load factors of only 60 percent to 80 percent are common, and some facilities only operate on a seasonal basis. Also, some firms may keep active permits for boilers that are rarely used. So, total actual emissions are well below the District's current NOx baseline.

For the same reasons the District's estimated emissions reductions are also significantly inflated. These "paper reductions" in emissions will tend to greatly overestimate the cost effectiveness of the proposal and inflate expectations as to how much this source category realistically has left to contribute to the cause of Valley-wide NOx emissions reductions. It is our contention that the District's current proposal will yield limited tangible emissions reductions at a very high cost.

- **Continuous Emissions Monitoring Systems Costs**
  As mentioned earlier, for those facilities with Subpart Db boilers, and utilizing AMS, the move to SCR will necessitate installation of CEMS .The cost of installing a CEMS system for NOx ranges from $100,000 to $200,000 per boiler, plus annual maintenance costs. The addition of NH_3 adds another $70,000 to $100,000. The District should incorporate these costs in its analysis and assist in developing and authorizing alternative emissions monitoring approaches which are approved by EPA and utilized in other air basins.

- **Cost Recovery**
  The issue of cost recovery time frames is critical. A 10-year life cycle cost analysis was used by the District in its economic analysis of the 2003 and 2005 amendments to rule 4306. Given that the District was using this time frame many firms made the (apparently false) assumption that they would not be expected to change their equipment again at least until the completion of the 10-year amortization period in 2015. However, the new Rule proposed by the District will require full compliance by June, 2011. *The current proposal would cause many firms to invest in new equipment well before they complete the 10-year investment period for the equipment that they purchased to comply with the 2005 amendments*. (And this is equipment which will be depreciated for 15 years.) This never-ending cycle of chasing new technologies and regulatory compliance is entirely unreasonable, and sends the message to industry that regulations are subject to change at any time, regardless of the cost to benefit ratio.

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The cost analysis presented in the previous tables does not account for the costs incurred by firms that first installed ultra low-NOx equipment and now will have to add SCR in the next few years. There are a number of firms in this situation and for them the total costs and NOx cost effectiveness figures will be prohibitive. The following table demonstrates several examples:

Table 4. Estimated Total Retrofit Costs for Firms that Have Already Installed Ultra Low-NOx Emissions Control Systems

Example	Total installation costs incurred to install ULN units	Estimated costs to install SCR units on the same boilers	Total installation costs incurred to reach 5 ppmv
Food Processor A	$1.42 million to retrofit 4 boilers	$1.3 million for all 4 boilers	$2.7 million
Food Processor B	$3.5 million to retrofit 5 boilers	$2.1 million for all 5 boilers	$5.6 million
Food Processor C	$0.5 million to retrofit 3 boilers	$0.9 million to retrofit 5 boilers	$1.3 million
Food Processor D	$0.9 million to retrofit 2 boilers	$0.5 million to retrofit 2 boilers	$1.4 million

If the District's proposed revisions to Rule 4306 were implemented these firms and many others will have spent millions of dollars between 2005 and 2011 to attain compliance. In these examples, the cost effectiveness should be calculated on the basis of the total expenditure, not just the addition of the SCR units to comply with the new rule. Using that analysis the cost effectiveness of the proposed rule will be many times higher than the District's cost effectiveness threshold and the socioeconomic impacts will be magnified as well. At the very minimum, the district should provide alternative cost effectiveness scenarios based on varying amortization time spans, three, five and 10 years, for example. This would provide a more realistic picture of the financial implications.

The data in Table 4 only includes the ULN and SCR system installation costs. The following example demonstrates the total cost (installation plus annual operation and maintenance costs) for a food processing firm that installed a ULN unit in 2005, and adds a SCR unit in 2011. The analysis assumes a 10-year cost recovery cycle for the ULN system (2005 – 2015) and a 10-year cost recovery cycle for the SCR system (2011-2021). The analysis *does not* include the operation and maintenance costs of the ULN system for the years 2011 – 2021.

EXAMPLE
Food Processor A, Boiler #3, retrofit with ULN in May, 2005:

- **2005 – 2011**: Annualized cost of $23,355/ton NOx for the ULN system
- **2011 – 2015**: Annualized cost of $23,355/ton NOx for the ULN system
  Annualized cost of $39,545/ton NOx for the SCR system
  Total annualized cost: $62,900/ton NOx
- **2011 – 2021**: Annualized cost of $32,616/yr/ton NOx for SCR
  Plus ongoing O&M costs for the ultra low NOx system

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For the period 2011 – 2015, the total annualized cost is 2.5 times higher than the District's cost effectiveness threshold of $24,500, and is 1.3 times higher for the rest of the cost recovery period. This data emphasizes the need for the District to allow firms sufficient time to recoup costs of each round of retrofits.
(Note: Food Processor A is from Table 4, and is Company #2 in Tables 1 and 3)

- **Cumulative Compliance Costs**
  A major concern to the business community in California is the ever growing cumulative cost of complying with new environmental regulations. For example, food processors must not only meet new boiler emissions limits, but also new forklift emissions standards, wastewater discharge requirements, and a host of other state and federal environmental regulations. In addition, costly new emissions standards for diesel trucks and farm equipment are forthcoming, and the California climate change initiative will have a profound impact on virtually all industries. In addition, processors must cope with rising costs for energy, water, and transportation, as well as rapidly escalating commodity prices, all of which include embedded environmental compliance costs.

  Although the District is not compelled to consider cumulative compliance costs, MCCV and CLFP ask the District to factor into its socioeconomic analysis how the accelerated time frame for reducing boiler emissions will add to the cost of doing business in Central California and put local businesses at a distinct economic disadvantage relative to firms in other areas.

IV Alternatives Proposed by MCCV and CLFP

It seems clear that, after the previous iterations of boiler NOx rules, a "one-size fits all" approach towards boiler emissions control technology is not feasible. Most of the significant reductions in emissions have already been achieved at food processing facilities, further gains will be technically and logistically challenging and depend on the specific application and operating conditions.

It is the contention of MCCV and CLFP that this situation compels the District to take a more flexible approach to imposing new standards and, rather than mandate only one compliance path, allow companies to install the most effective equipment for their unique operation in a manner and time frame consistent with the District's emissions reductions targets. MCCV and CLFP would like to propose alternative options that will provide the District with significant NOx emissions reductions consistent with the draft PM 2.5 Plan and the District's 2007 Ozone Plan. The key elements of our proposal are as follows:

1. **Extend the compliance deadlines to match the target compliance dates in the 2007 Ozone Plan and PM 2.5 plan**. Food processors and other firms carefully reviewed the revisions to Rule 4306 adopted in 2005, considered their compliance options, and made decisions to invest large sums of money to install equipment that would *fully comply* with the District's standards and meet their site specific technical and logistical requirements. The firms invested in new equipment fully expecting that no substantive changes would be made in the NOx emissions limit prior to the end of the current rule's 10-year cost recovery cycle in 2015. In many cases, the District's new rule will render those investments useless in just three years and send the signal to industry that there are no assurances of regulatory certainty. This situation can be

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remedied with a phased-in compliance schedule that ensures emissions reductions and also provides some degree of regulatory certainty.

2. **Provide more flexibility for load following/variable load units.** As mentioned previously, MCCV and CLFP strongly believe that a one size fits all approach to regulating boiler emissions is not technically or economically feasible. Load following units with rapid and significant swings in demand are challenging to operate and in many cases may not be able to achieve the same emissions level as a base loaded unit. This technical reality should be explicitly acknowledged with a revised emission limits and compliance schedule. As we have noted earlier, there have been a number of unintended consequences resulting from attempts to control these units in the same fashion as base-loaded or constant load units.

   To ensure accurate implementation of this option, a review of the District's definition of what constitutes a load following unit is warranted. MCCV and CLFP believe that the current definition (used to determine which units would qualify for the enhanced compliance provision in the 2005 rule amendments) is insufficient. The district is, however, already using a workable definition as part of its source test guidelines for boilers, steam generators and process heaters, where the distinction is made between ***constant load units*** and ***variable load units***. We would propose that these definitions be carried over into Rule 4306. The definitions are as follows:

   Constant Load Unit: A unit for which the firing rate varies no more than ±10 percentage points except during periods of startup and shutdown.

   Variable Load Unit: Any unit other than a Constant Load Unit.

3. **Provide a suite of options that allows firms to choose the most effective path to compliance while providing sufficient emissions reductions.** This source category has been regulated for years and most of the significant gains have been realized with respect to major reductions in emissions. Going forward it will be important to allow firms to assess their individual operational needs and select compliance options that make technical, logistical, and economic sense yet provide the district with needed reductions. To that end, MCCV and CLFP are proposing in the next section of this text a range of compliance options that will meet the District's mandates and provide a range of choices for industry**.**

4. **Encourage the creation and approval of an alternative monitoring system such as predictive or parametric emissions monitoring methods.** Alternative monitoring systems such as predictive or parametric methods will provide the necessary assurance of compliance at a more reasonable cost.

SPECIFIC PROPOSALS

A. Revise Compliance Schedule, Categories & Limits

The following table accomplishes the objectives set forth above and creates more appropriate categories to more accurately reflect the inventory; implements a tiered compliance timeline based on these categories; and provides varied emission limits better suited to the type and size of unit.

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Table 5. MCCV/CLFP Sample Compliance Schedule * Food Processing & Manufacturers

Current Boiler Retrofit Category	Proposed Compliance Date	Proposed NOx Permit Level at Compliance Date
Have already retrofit to SCR, **constant load* unit (>20 MMBtu/hr)	2013	6 ppmv
Have already retrofit to SCR, *variable load unit (>20 MMBtu/hr)	2013 2017	9 ppmv 7 ppmv
Have already retrofit to ULN, *constant load* unit (>20 MMBtu/hr)	2015	6 ppmv
Have already retrofit to ULN, variable load unit (>20 MMBtu/hr)	2017	7 ppmv
No retrofit of any type installed to date, load following unit (*the enhanced option from 2005 Rule 4306*) (>20 MMBtu/hr)	2011	7 ppmv

**Note: These are proposed new definitions similar to those used in Source Test Guidance Documents*

B. Additional Compliance Options
In addition to the proposed options above, MCCV and CLFP would like to add the following compliance options which would provide the district with reductions in advance of the command and control deadlines.

Advanced Emission Reduction Options (AERO)

(1) Early Compliance Incentive--Facilities could elect, on or before June 1, 2011, to reduce emissions from at least one boiler to <5 ppmv. In exchange for reducing the emissions below the prescribed limit the firm will be provided with an extended time frame (to 2017) to bring other units into full compliance with NOx emissions standards.

(2) Facility Concept--Allow for facility-wide NOx emissions permit based on aggregated emissions for all of the permitted boiler equipment. This option would encourage firms to retrofit or replace some equipment to achieve significant early emissions reductions to come into compliance with their facility limit, but allow them to make other retrofits or replacements in the most cost effective manner and time frame.

(3) Voluntary Reduction in Fuel Consumption: The facility would elect to amend its permit to reduce its fuel use limit. The amount of NOx emissions reduction achieved through reduced fuel use must be equivalent to what would be achieved by an SCR boiler retrofit. The fuel use reductions could be achieved by curtailing operations, using fuel economizers, heat recovery systems, or other approved measures. In cases where the reductions occurred during winter months the District would gain additional PM 2.5 benefits. Facilities must decide prior to 2011 if they plan to pursue this option. This would provide the District with the same total NOx emissions reduction at an earlier date and would have an additional greenhouse gas benefits.

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V. Advantages of the MCCV/CLFP Proposal

We believe that our proposal provides a number of tangible benefits to the District and its efforts to meet it NOx emissions reduction goals:

- **All boilers greater than 20 MMBtu will have SCR or advanced emissions control technology.** BACT will be in place at all facilities, removing the uncertainty as to whether ultra low NOx boilers can achieve emissions reductions comparable to SCR. This would harmonize District rules with South Coast Air Management District mandates for the use of SCR.

- **Significant reductions in NOx emissions will be achieved.** By 2017, the permit limits for these units will be reduced from the current 9 to15 ppmv to either 6 ppmv or 7 ppmv.

- **The proposal is consistent with target compliance dates in the District's Ozone Fast Track program and proposed PM 2.5 plan.** Most of the emissions reductions will be achieved before the District's 2014 (PM 2.5) or 2017 (ozone) target dates and some will still be achieved by or before 2011.

- **The economic impact on industry, workers, and the local economy will be greatly reduced compared to the District's current proposal.** Firms that have already invested in ultra low-NOx equipment in the last few years will be allowed to recoup their costs within the prescribed 10-year cycle. All firms will be allowed to pursue a compliance path that is most technically and economically feasible for their individual operation.

Conclusion

The District faces a daunting challenge to meet its NOx and PM 2.5 goals over the next few years. The District's singular focus on attaining its objectives should be tempered with the recognition that environmental compliance achieved at any, and all, cost may have severe long term economic consequences for the region and foster a perception that the San Joaquin Valley has an uncertain, costly, and hostile business environment. The options presented here will directly address those concerns without compromising long term air quality.

We do look forward to receiving the data from our information request so that we may review the information to obtain a more complete view of the total potential emissions reductions from this source category, total compliance costs and better develop alternatives that best match the unique inventory.

MCCV and CLFP look forward to working with you and your staff to discuss this proposal and to develop a program that is feasible for industry and meets the District's objectives.

Sincerely,

Jan Marie Ennenga
MCCV Executive Director

Rob Neenan
CLFP Director of Regulatory Affairs