Attachment to STAPPA and ALAPCO Comments
On Proposed $PM_{2.5}$ Implementation Rule

I. Classifications

While EPA's preferred option is not to establish a classification scheme that creates different categories for areas that fail to attain the $PM_{2.5}$ standard depending on the severity of the nonattainment problem, the agency does request comment on whether it should adopt a two-tier classification approach. STAPPA and ALAPCO believe it is important to provide incentives to areas to attain as expeditiously as practicable, and a classification scheme that imposes more rigorous requirements on $PM_{2.5}$ nonattainment areas that need more time to attain is one that has worked well in the past. In fact, this is the system Congress established for ozone under Title I, Part D, Subpart 2.

Accordingly, STAPPA and ALAPCO recommend that EPA establish a classification scheme that imposes more rigorous requirements on areas that cannot attain in five years or less. The classification should initially be based on design values, but provide for areas to move between classifications if states' modeling projections demonstrate they can attain sooner or later than their initial classification provides. For example, an area with a high design value placed in a higher classification to give it more time to attain can petition to be moved to a lower classification if it can demonstrate that it will attain within five years. If EPA decides not to establish a classification scheme, then EPA should nevertheless impose more stringent requirements on areas that need more than five years to attain the $PM_{2.5}$ standard.

II. Reasonably Available Control Technology (RACT)

a. Satisfaction of RACT Requirement

EPA presents three options for satisfying the RACT requirement in the Clean Air Act. Option 1 is to require RACT for all stationary sources with the potential to emit (PTE) more than 100 tons per year (TPY) of direct $PM_{2.5}$ or any precursor; EPA is taking comment on different TPY thresholds. Option 2 provides that RACT is required for stationary sources only to the extent that it is needed for expeditious attainment or to meet reasonable further progress (RFP) requirements. Option 3 is a hybrid of the previous options, with Option 2 applicable to areas that will attain in five years or less and Option 1 to areas that need more than five years.

STAPPA and ALAPCO strongly support Option 1. First, Option 1 is the only option that complies with the Clean Air Act. Section 172(c)(1) of the Act requires that state implementation plans (SIPs) provide for implementation (not simply analysis) of all reasonably available control measures (RACM) as expeditiously as practicable, "including such reductions in emissions from existing sources in the area as may be obtained through the adoption, at a minimum, of [RACT]" (emphasis supplied). Given that the Act requires implementation as expeditiously as practicable of RACT at a

minimum, we find it hard to read the Act as allowing for a state to identify RACT but then not adopt it (as Option 2 and Option 3 provide).

Second, Option 1 makes administrative sense. It is a waste of state resources to conduct a RACT analysis and identify RACT but then not impose RACT. Requiring RACT for major sources simplifies the SIP development process, since it focuses the analysis on imposition of RACT controls on large sources instead of on demonstrating the need for those controls or exploring other plan options. In addition, in $PM_{2.5}$ nonattainment areas that are also in nonattainment for ozone, many of these sources will likely already be controlled for ozone, so it makes sense to also control them for $PM_{2.5}$.

Third, Option 1 is easily understandable and explainable to the public. Options 2 and 3 are not. Residents in a nonattainment area will not understand why large sources of pollution in the area are not being controlled if technology that was feasible and cost-effective to control this pollution has been identified.

Fourth, as EPA states in the proposal, implementing the RACT requirement on all major sources in $PM_{2.5}$ nonattainment areas levels the playing field from one nonattainment area to another and *will improve* air quality in the nonattainment area (70 *Federal Register* 66018). This latter certainty is important to ensure attainment as expeditiously as practicable.

Finally, Options 2 and 3 present severe technical challenges. It is difficult to know what would constitute a satisfactory demonstration that RACT would not advance attainment by a year. As EPA notes, the D.C. Circuit Court of Appeals in 2002 concluded in *Sierra Club v. EPA*, 294 F.3d 155 (2002) that "neither the local government authority nor EPA had provided an adequate analysis to support the determination that certain control measures were not in fact capable of advancing the attainment date for that area" (70 *Federal Register* at 66020, footnote 72). Options 2 and 3 subject a SIP to legal challenge about RACT identified, but not adopted.

b. RACT Thresholds

With respect to RACT thresholds, STAPPA and ALAPCO strongly support different thresholds, depending on the severity of pollution in the area and regardless of whether EPA adopts a classification scheme. The associations recommend that for areas that will attain within five years, the RACT PTE threshold should be 25-50 TPY for direct $PM_{2.5}$ and 100 TPY for NO_x and SO_2. We support a lower PTE threshold for direct $PM_{2.5}$ since it directly contributes to the nonattainment problem. For areas that need more than five years to attain, the RACT PTE threshold for direct $PM_{2.5}$ should be even lower – 10-25 TPY.

EPA has ample authority under Section 171 of the Clean Air Act to develop more protective thresholds that will result in expeditious attainment. Section 171 states that "[t]he term 'reasonable further progress' means such annual incremental reductions in emissions of the relevant air pollutant as are required by this part or may reasonably be

required by the Administrator for the purpose of ensuring attainment of the applicable national ambient air quality standard by the applicable date" (emphasis added). Thus, Congress gave the Administrator the flexibility to require emissions reductions that will ensure attainment of the NAAQS. More stringent direct $PM_{2.5}$ RACT PTE thresholds will assist states in achieving prompt attainment of the $PM_{2.5}$ NAAQS. The following reasons exist for lowering the proposed thresholds for direct $PM_{2.5}$.

First, adverse health impacts of $PM_{2.5}$ result from exposure at significantly lower levels than other pollutants. The final rule should reflect this known correlation between low levels of exposure and harmful impacts on human health. If the RACT PTE (or major source – see below) threshold for direct $PM_{2.5}$ emissions is set at 100 TPY, many state and local agencies will have an extremely difficult time attaining the $PM_{2.5}$ standard because of the contributions to ambient levels of $PM_{2.5}$ from numerous uncontrolled $PM_{2.5}$ sources whose emissions are below the threshold.

Second, the emissions of very few sources could easily prevent an area from achieving reasonable further progress toward attaining the $PM_{2.5}$ NAAQS or could throw an area out of attainment status. In section III.M.5.b of the proposed rule, a modeling analysis conducted by EPA compares $PM_{2.5}$ stack emissions to the predicted ambient impact. The results demonstrate that a source emitting 99 tons per year of $PM_{2.5}$ could have up to a 5.3 ug/m^3 annual $PM_{2.5}$ impact, consuming somewhat more than one-third of the allowable annual NAAQS of 15 ug/m^3. Thus, the uncontrolled emissions of only three sources of this size would throw an area into nonattainment.

c. CAIR and RACT

EPA proposes that, for states that satisfy their Clean Air Interstate Rule (CAIR) requirements entirely through emissions reductions from electric generating units (EGUs), RACT requirements for SO_2 and NO_x would be satisfied for EGU sources covered by CAIR, as long as existing SCRs in those nonattainment areas are operated year-round beginning in 2009.

STAPPA and ALAPCO strongly oppose this provision. Throughout the development of CAIR, EPA has made clear that its rule was designed to address *transported* pollution from one state into another and was not to be used as an attainment strategy. Accordingly, when EPA established emission caps for EGUs under CAIR, the agency purposely did not base its decisions on what levels of reductions from EGUs would be necessary to demonstrate attainment of the $PM_{2.5}$ standards. While EPA's models show an expected air quality improvement in many areas, not all areas will reach attainment through CAIR. Unfortunately, by now concluding that CAIR – and its cap-and-trade program – satisfies the RACT requirements under the Clean Air Act, there is no longer any requirement for an EGU that is located in a nonattainment area to reduce its emissions of pollution *at all*; it could simply buy allowances to meet its CAIR requirements, notwithstanding the fact that these sources are among the most cost-effective to control.

As support for this proposal, EPA states that requiring source-specific controls on EGUs will not reduce the total amount of emissions because of the cap-and-trade system under CAIR (70 *Federal Register* at 66025). However, source-specific controls ensure that emissions are reduced *in the nonattainment area*, which is the intent of the RACT requirement. We note that for some states, partial counties were included in a nonattainment area solely because an EGU is located in that county; thus the most obvious source for control is that EGU. If – as it seems EPA is arguing – only total emissions matter, then why doesn't EPA allow a state to look at sources all across the state – or even region- or nation-wide – for reductions? The reason is simple: because emissions in or near the nonattainment area are the most important to target for reductions.

STAPPA and ALAPCO also question how this proposal would be implemented for states that request an extension of an attainment date because attaining in five years or less is impracticable (section III.C.4). Would EPA still hold to its interpretation that CAIR equals RACT for EGUs and not require additional reductions from EGUs, even if an area cannot attain in five years but could attain more expeditiously if it controlled EGUs? If yes, how is this consistent with the Clean Air Act's requirement to attain as expeditiously as practicable?

d. Other RACT Issues: Viability of Existing RACT Determinations, Economic Feasibility, RACT Averaging and Timing

With respect to existing RACT determinations, we support a new RACT determination if an existing one is more than five years old, given the advancement of technology. We agree with EPA that if a previous RACT determination resulted in no controls, a new RACT analysis is required. STAPPA and ALAPCO believe that if a RACT determination resulted in only operational changes and not physical modifications that are in effect year-round, this is equivalent to a RACT determination resulting in no controls, and thus these determinations should be revisited. SIPs should not be burdened by out-of-date RACT determinations.

With respect to economic feasibility, we agree that EPA should not set a specific dollar per ton cost threshold. STAPPA and ALAPCO note that EPA's proposal states that the benefits of controlling $PM_{2.5}$ outweigh costs by 3 to over 30 times (70 *Federal Register* at 66006). This suggests that controls would need to be quite costly in order to outweigh the substantial benefits of reducing $PM_{2.5}$ and precursor emissions.

EPA proposes to provide states with a nonattainment area RACT averaging option for EGUs – an option previously available in the ozone program – and to make this option available to non-EGU categories for which accountability of an averaging system could be assured. STAPPA and ALAPCO are concerned that, while this option presents theoretical economic efficiencies, it also presents administrative difficulties. First, a state or locality would need to administer a cap-and-trade program in the nonattainment area, which is resource-intensive, as opposed to simply determining whether a particular technology had been installed by a source and having the source

confirm the technology is working properly. Second, an averaging program may fail to adequately address peaking units and can perpetuate or create local air quality problems. Accordingly, if EPA were to include a RACT averaging program, it should be limited to equipment at a common site with a single operating permit and limited to EGUs; thus, a single utility owner would be responsible for tracking and managing the RACT averaging program and thus could be held individually responsible for any excesses in emissions.

On timing of RACT, we believe that rather than imposing strict deadlines for applying RACT, EPA should follow the milestone approach we describe in section V below for RFP. If nevertheless EPA chooses to apply a deadline for RACT implementation and selects as the deadline the beginning of the final year of the three-year period for which attainment is to be assessed, a source should not be able to escape a RACT requirement simply because it cannot meet that deadline for putting on controls. For example, for an area with an attainment date of 2010, a source may still be required to put on controls even if it cannot do so until after January 1, 2009 – because these controls will still help improve air quality in the nonattainment area.

III. Precursors

STAPPA and ALAPCO generally support EPA's proposed adoption of the basic new source review (NSR) regulatory framework for $PM_{2.5}$ and $PM_{2.5}$ precursors. State and local agencies should have the ability to limit and mitigate $PM_{2.5}$ emissions from major sources by requiring best available control technology (BACT) and air quality analysis in prevention of significant deterioration (PSD) areas, and by requiring the lowest achievable emissions rate (LAER), and emissions offsets in NSR nonattainment areas. We agree with EPA that the existing structure for PSD and nonattainment NSR will best enable states to achieve attainment of the $PM_{2.5}$ NAAQS.

STAPPA and ALAPCO support EPA's proposal to identify and regulate $PM_{2.5}$ precursors in addition to direct emissions of $PM_{2.5}$. We also agree that it has been established with scientific certainty that precursors contribute significantly to ambient $PM_{2.5}$ concentrations in most parts of the country, and that EPA has ample legal authority under the Clean Air Act to require precursor regulation. In fact, some $PM_{2.5}$ precursors are already subject to major NSR under other NAAQS.

Furthermore, we find EPA's treatment of the different precursors generally reasonable. We agree that SO_2 should be regulated as a precursor pollutant in all parts of the country. We also agree that NO_x should be regulated as a precursor pollutant unless it can be demonstrated that nitrates are not a significant portion of $PM_{2.5}$ in a particular state and that the area is not in a state identified by EPA as a source of a $PM_{2.5}$ interstate transport problem. For NO_x to be removed as a precursor, a state and/or EPA should be required to include an assessment of the impact on other nonattainment areas. Furthermore, there should also be regional consistency on how this issue is addressed. Finally, EPA should provide downwind states an opportunity to comment on an upwind state's desire to remove a precursor and an opportunity to request that an upwind state add a precursor.

We support EPA's proposal to authorize, but not require, regulation of VOC and ammonia emissions as precursor emissions. Because transport of these precursor emissions may cause problems, however, we encourage EPA to develop guidance to analyze and evaluate boundary impacts in cases when the VOC or ammonia precursor emissions of a state may be affecting attainment of the $PM_{2.5}$ NAAQS in a neighboring state. EPA should also develop guidance that list the criteria for overcoming the presumption that a precursor (whether NO_x, VOC or ammonia) should be or not be considered for a nonattainment area.

Because of the complex chemical and physical interaction of these precursor pollutants, and our current limited understanding of the atmospheric chemistry involved in their transformation to $PM_{2.5}$ particle pollution, STAPPA and ALAPCO urge EPA to periodically revisit regulation of $PM_{2.5}$ precursors. At least every three years, EPA should assess the scientific findings and developments of precursors, particularly with regard to ammonia, and should make appropriate adjustments to the programmatic requirements for implementing the $PM_{2.5}$ NAAQS that are consistent with scientific advances.

IV. New Source Review (NSR)

a. Major Source Thresholds for $PM_{2.5}$ Direct and Precursor Pollutants

STAPPA and ALAPCO strongly oppose EPA's proposed major source threshold of 100 TPY for direct emissions of $PM_{2.5}$ for the major NSR program. Although this level is adequate for the precursors SO_2 and NO_x, it is inadequate for direct emissions of $PM_{2.5.}$ Rather, we recommend a major source limit in the range of 25-50 TPY of direct $PM_{2.5}$ in areas that are likely to attain the $PM_{2.5}$ NAAQS within five years, and a level of 10-25 TPY in areas that are likely to take more than five years to achieve the NAAQS. Compelling reasons exist for establishing lower thresholds for direct $PM_{2.5}$ emissions.

First, as noted in section II.b of our comments, EPA has ample authority to establish more stringent thresholds to provide for more expeditious attainment. More stringent direct $PM_{2.5}$ NSR major source emissions thresholds will assist states in achieving prompt attainment of the $PM_{2.5}$ NAAQS.

Second, state and local agencies disagree with the statement in the proposed rule that "the more current inventory data show that the number of sources that would be covered as major sources by a lower major source threshold would not increase substantially unless the threshold were lowered to 20 TPY or more." On the contrary, a number of state agencies that have reviewed their emissions inventories have found a significant number of sources of $PM_{2.5}$ that emit at levels between 45-99 TPY. Our information indicates that if EPA were to establish a major source threshold of 50 TPY, the number of sources subject to NSR for $PM_{2.5}$ emissions could double. Thus, EPA's statement is not accurate that "…even if EPA had the discretion to adopt a 70 tpy major source threshold for $PM_{2.5}$ nonattainment areas…[not] that many additional sources

would be subject to the major NSR program in $PM_{2.5}$ nonattainment areas" (70 *Federal Register* at 66037). If, however, the 25-50 and 10-25 TPY levels proposed by STAPPA and ALAPCO were adopted, NSR would be applicable to many more new and modifying sources, with resulting benefits for public health. The lower TPY thresholds should be required by EPA as reasonable cutoff points for direct $PM_{2.5}$ emissions.

Finally, EPA suggests that if a state's ability to achieve reasonable further progress is undermined, then regulation under a state's minor NSR source program should be considered. The proposed rule sets forth a hypothetical example, in which construction of a $PM_{2.5}$ source emitting 99 TPY with no major NSR controls and without mitigation undermines reasonable further progress. However, reliance on a state's minor NSR program in such a situation is misplaced. Minor NSR programs vary significantly from state to state. Furthermore, they do not address interstate transport of emissions. Depending on minor source NSR is simply not an effective substitute for an adequately protective major source threshold that would be applied uniformly throughout the country. STAPPA and ALAPCO believe that, without an adequately protective major source threshold, state and local agencies' ability to achieve the NAAQS for $PM_{2.5}$ is likely to be severely compromised.[1] We urge EPA to adopt the thresholds and area categories that we have suggested for direct emissions of $PM_{2.5}$.

b. Significant Emissions Rates for Direct $PM_{2.5}$ and $PM_{2.5}$ Precursor Emissions

STAPPA and ALAPCO support EPA's preferred options of defining a modification subject to major NSR as a significant emissions increase of 10 tons per year of direct $PM_{2.5}$. In addition, it appears to us that the methods by which EPA arrived at this result were generally sound—namely, using the Industrial Source Complex Short Term (ISC) model with meteorological data from Pittsburgh and Oklahoma City to assess the impact of emissions increases on ambient $PM_{2.5}$ concentrations. Determining the ratio between the $PM_{2.5}$ and the PM_{10} and total suspended particulate (TSP) standards in relation to the annual averaging time also appears reasonable.

We also support the significant emissions increase of 40 TPY of precursor emissions. A higher level than that for direct $PM_{2.5}$ emissions is justified in light of the greater impact on ambient $PM_{2.5}$ levels that are attributable to direct $PM_{2.5}$. Moreover, it is important to harmonize the existing "significant" emissions rates for the pollutants

[1] EPA has already proposed a rule for electric generating units (EGUs) that, if finalized, will undoubtedly compromise the $PM_{2.5}$ attainment efforts of state and local agencies. EPA's October 20 "Proposed Rule on PSD, Nonattainment NSR, and NSPS: Emissions Test for Electric Generating Units (EGUs)" allows power plants, including the oldest, dirtiest coal-fired power plants, to use an hourly test for measuring increases in emissions, enabling them to modify their process units without knowledge of the state or local agency, without installing BACT or LAER (and obtaining offsets), and without undertaking any air quality analysis. If this rule is finalized, it will seriously undermine our SIP planning efforts and impair our ability to protect the health and welfare of our communities. STAPPA and ALAPCO have testified on this proposed rule. We repeat now, in the context of the proposed $PM_{2.5}$ Implementation Rule, that our efforts to meet the NAAQS for $PM_{2.5}$ will be jeopardized in many parts of the country by promulgation of the EGU NSR rule.

SO_2, NO_x and VOC with their corresponding precursor "significant" emissions rates, to the greatest extent possible, so that a source can streamline determinations regarding the applicable control technology and analysis of air quality impacts into a single decision-making process for both $PM_{2.5}$ and other criteria pollutants that also cover $PM_{2.5}$ precursors.

c. Condensable Emissions

We support EPA's conclusion that condensable emissions must be included when determining whether a source is subject to the major NSR program. We also support EPA's rationale for this choice, namely that condensable emissions comprise a significant component of $PM_{2.5}$ and the failure to include them may result in adverse consequences to human health and the environment. We encourage EPA to define "condensables" in the final rule to include gaseous pollutants and those that condense into particle form, such as primary sulfates, nitrates, organic material and metals—that is, both the "front end" and "back half" of condensables. Furthermore, we urge EPA to identify a stationary source test method for $PM_{2.5}$ that will enable state and local agencies to accurately identify the fraction of the condensables that is $PM_{2.5}$ in order that permit limits can be set, increments can be tracked and ambient impacts can be evaluated.

d. $PM_{2.5}$ Increments in PSD Areas

STAPPA and ALAPCO are concerned that the proposed rule does not include increments for $PM_{2.5}$ that would enable agencies to evaluate and limit degradation of ambient air quality in PSD areas. Rather, the proposed rule states, "we are in the process of developing an approach for preventing significant deterioration of air quality which may include $PM_{2.5}$ increments" and notes that the Clean Air Act "does not dictate increments" except in the cases of PM_{10} and SO_2. We note that, although it does not in fact specify an increment system, section 166 of the Clean Air Act requires promulgation for nitrogen oxides of "specific measures *at least as effective as the increments established in section 163*, which may contain air quality increments, emission density requirements, or other measures" (emphasis added). The same reasoning should apply to $PM_{2.5}$. The measures proposed as alternatives to increments in EPA's NO_x Increments proposal, for example—cap-and-trade or a state planning approach—were *not as effective as* an increment tracking system and should not be considered for $PM_{2.5}$. (*See* 70 *Federal Register* 8879-8917.) The agency has ample authority to promulgate an increment system for $PM_{2.5}$ and should do so expeditiously.

Moreover, STAPPA and ALAPCO are troubled by the section of the proposed rule titled, "How will the air quality analysis required under section 165(a)(3) be implemented?" (Section 11). EPA notes that "such analyses would consider how a source affects air quality at existing $PM_{2.5}$ monitor locations as well as other locations…" No mention is made of modeling demonstrations. Section 165(a)(3), however, requires that NAAQS compliance be demonstrated in any air quality control region (by the permit applicant), and that PSD increment compliance be demonstrated in the attainment area of the source, including distant Class I areas. Monitors alone are insufficient for such a

compliance demonstration. Modeled impacts should continue to be required for PSD permit applicants.

e. Need for Greater Level of Detail for PSD Areas in Delegated States

STAPPA and ALAPCO also urge EPA to promptly address major sources of $PM_{2.5}$ in attainment areas in delegated states. Because delegated states will be subject to the rule requirements immediately upon promulgation, they will need to have in place not only PSD increments, as noted, but implementation guidelines for BACT review, as well as guidelines on netting and modeling for major sources in attainment areas. Of particular concern is the lack of guidance for modeling precursor emissions and the absence of increment levels. If photochemical modeling of precursors will be required, for example, this will have a significant resource impact that is out of proportion to single source permitting determinations. Similarly, the standard for conducting BACT review or netting is not clearly stated in the proposed rule. We urge EPA to promptly address questions such as the role of $PM_{2.5}$ precursors in BACT selection and netting procedures involving direct and precursor $PM_{2.5}$ emissions. Delegated states will need such guidance immediately upon EPA promulgation of the rule.

f. Significant Impact Levels (SILs) for Direct $PM_{2.5}$ and Precursor Emissions

SILs should be based on direct $PM_{2.5}$ emissions. States need SIL values as soon as possible in order to develop their SIPs in both PSD and nonattainment NSR areas. We recommend applying the current ratio between the PM_{10} NAAQS and the PM_{10} SIL to the $PM_{2.5}$ NAAQS to establish an annual $PM_{2.5}$ SIL of 0.3 ug/m^3 for direct $PM_{2.5}$ emissions. For the 24-hour $PM_{2.5}$ SIL for direct $PM_{2.5}$ emissions, the same ratio results in approximately 2 ug/m^3.

Development of SILs for precursors is more problematic given the limited scientific understanding of how precursor emissions will affect ambient $PM_{2.5}$ levels. State and local agencies recognize that the far-field impacts of precursor pollutants, in particular, are not well understood. We recommend that, until precursor ambient impacts are studied adequately and SILs are developed, EPA should use the existing SILs for NO_x and SO_x for the corresponding $PM_{2.5}$ precursor pollutants. State and local agencies should have the flexibility to utilize these existing SILs to determine whether there should be more comprehensive air quality analyses of cumulative impacts in a Class I or II area or whether adverse impacts in a nonattainment area will be caused by a source's emissions. We encourage EPA to study $PM_{2.5}$ emissions and to initiate a rulemaking addressing SILs for precursors when sufficient information has been accumulated.

g. PSD Preconstruction Monitoring

State and local agencies believe that pre-construction $PM_{2.5}$ monitoring should be required, but that sources that are able to demonstrate that the existing $PM_{2.5}$ monitoring network is adequate to measure impacts from new sources should be exempted on a case-

by-case basis. Nonetheless, reductions of the $PM_{2.5}$ monitor network are occurring because EPA is preparing to deploy the $PM_{10-2.5}$ coarse network and multipollutant stations. In some parts of the country, these reductions may make it more difficult to make the required adequacy demonstration. State and local agencies have voiced concerns that the $PM_{2.5}$ monitoring network must continue to provide sufficient baseline information throughout the country. We urge EPA to reconsider eliminating particular $PM_{2.5}$ monitors when advised by the state and local agencies that their retention is necessary. We should proceed cautiously as we proceed to develop SIPs and control strategies to meet the $PM_{2.5}$ NAAQS.

h. Offset Requirements for Nonattainment Areas

STAPPA and ALAPCO believe that any offset ratio of less than 1 to 1 for both direct and precursor emissions of $PM_{2.5}$ should be allowed only if there is a net air quality benefit and if the lower ratio is justified by air quality modeling analysis. For $PM_{2.5}$ precursors, chemical reactivity modeling demonstrations should be developed and approved that are, at a minimum, capable of determining the impacts of the precursor emissions on the air quality in the nonattainment area in which the source is located.

i. Interprecursor Trading for Offset Compliance

EPA has proposed that increases in emissions of direct $PM_{2.5}$ could be offset by decreases in $PM_{2.5}$ precursor emissions in nonattainment areas. We oppose this practice because offsetting like amounts of precursor and direct emissions is inherently disproportionate and will result in greater amounts of direct $PM_{2.5}$ emissions. Rather, we support the trading of $PM_{2.5}$ direct emissions with other $PM_{2.5}$ direct emissions, and trading of SO_x and NO_x precursors with the same precursor, except that EPA should allow direct $PM_{2.5}$ emission decreases to offset increases of precursor emissions in nonattainment areas.

j. Transition Options

STAPPA and ALAPCO believe that Option 1 is preferable, under which EPA continues to implement the 1997 and 2004 guidance using PM_{10} emissions as a surrogate for $PM_{2.5}$. EPA has also proposed that this option include two conditions: First, until $PM_{2.5}$ SIPs have been finalized, states must require sources to demonstrate that emissions from construction or operation of a facility will not cause or contribute to a violation of the $PM_{2.5}$ NAAQS; second, condensable emissions should be included in determining major NSR applicability and control. Although we generally support this option, existing source testing methods for condensable emissions are inadequate to determine major NSR applicability. No method or combination of methods currently appears to accurately and reliably speciate particulate matter so that the $PM_{2.5}$ fraction can be identified with sufficient precision to include in an enforceable permit. Although in some cases PM_{10} methods might serve as adequate substitutes, in close cases, greater accuracy will be needed.

V. Reasonable Further Progress (RFP)

STAPPA and ALAPCO support EPA's proposal eliminating RFP requirements for areas that will attain the NAAQS in five years or less. For areas that require more time, however, STAPPA and ALAPCO believe that RFP should be retained, consisting of milestones, rather than fixed percentage reductions each year, because emissions reductions may be achieved in a non-linear fashion. For example, for an EGU, milestones might include dates for submission of permit, commencement of construction, on-site progress milestones and control technology installation.

EPA proposes that emissions reductions in the following geographic areas are creditable towards RFP: 1) for direct $PM_{2.5}$ emissions – in the nonattainment area only; 2) for NO_x and SO_2 – in the nonattainment area and within 200 kilometers of the nonattainment area, but a state needs to submit "appropriate documentation" that these sources affect air quality in the nonattainment area; 3) for VOCs – in the nonattainment area and up to 100 kilometers of the nonattainment area; however, if VOCs are found to be significant contributors to area's nonattainment problem, then RFP credit will be given for VOC reductions in nonattainment area only. STAPPA and ALAPCO generally support EPA's approach on the geographic scope of RFP, but we suggest that EPA take a flexible approach on the 200 kilometer limit if a state can demonstrate that emissions reductions of NO_x and SO_2 outside the 200 kilometer limit are demonstrably benefiting the nonattainment area. EPA also needs to clarify whether credit can be taken for measures in another state, and, if so, how the enforceability requirement would be met for these measures.

VI. Modeling and Attainment Demonstrations

EPA proposes to permit states to use certain local, regional and/or national modeling analyses that have been developed to support federal or local emission reduction programs, as long as the analyses meet EPA's modeling criteria. EPA also supports the use of one-atmosphere modeling and multi-pollutant modeling. STAPPA and ALAPCO agree with this proposal. Section III.E.4 of the proposed $PM_{2.5}$ Implementation Rule provides that states can use existing analyses to project interim air quality improvements from regional emissions reduction strategies. EPA should indicate which existing analyses it is referring to and whether these analyses will be provided by EPA.

EPA proposes to consider requiring mid-course reviews (MCRs) on a case by case basis, but it says it is considering requiring MCRs for areas granted extensions of their attainment date two years or more beyond the first five-year period (April 2012-2015). In this case, EPA says the MCR should be submitted within five years of the effective date of designation (April 2010). STAPPA and ALAPCO note that EPA's proposed timeframe would have areas submit an MCR only two years after a SIP is due, which is not much time to assess progress. We recommend instead that areas with attainment dates two years or more beyond the first five-year period submit a report three years after the SIPs are due (April 2011) and every three years thereafter, if necessary, to

report on whether control measures are being implemented on schedule and having the desired effect.

VII. Reasonably Available Control Measures (RACM)

In the preamble, EPA provides a list of measures to consider in determining RACM, but the agency does not indicate specific source categories to target. There is ample evidence that specific source categories are major contributors to $PM_{2.5}$ and $PM_{2.5}$ precursor pollution and EPA should list these source categories. In its report to the Clean Air Act Advisory Committee, the Air Quality Management Work Group – using information provided by EPA – listed key source categories for pollution control, based on projected 2010 national emissions for $PM_{2.5}$ and the precursors of NO_x, SO_2 and VOCs. These key source categories are: EGUs; industrial, commercial and institutional boilers; heavy-duty diesel engines; ships/locomotives/aircraft; residential wood smoke; open burning; pulp and paper; petroleum refineries; and, for VOCs only, industrial surface coatings, non-industrial solvents and architectural coatings (Air Quality Management Work Group, *Recommendations for the Clean Air Act Advisory Committee*, p. 19 (2005)). RACM analysis should include, but not be limited to, these source categories.

VIII. Enforcement and Compliance

State and local agencies and EPA share a commitment to preserving and improving the nation's air quality. Implementing a compliance assurance and enforcement program with the goal of achieving and maintaining compliance with air pollution control requirements by all regulated entities is a major part of this shared commitment. EPA's proposed $PM_{2.5}$ Implementation Rule includes compliance-related questions concerning test methods and monitoring for $PM_{2.5}$ emissions. STAPPA and ALAPCO are pleased to respond to these questions but also wish to raise more general concerns about this part of the proposal. We strongly support implementation of the $PM_{2.5}$ NAAQS, but we fear that, without the enforcement and compliance tools necessary to enforce them, their health and welfare benefits may not be realized. Although many stack test methods and monitoring strategies for $PM_{2.5}$ emissions are discussed in the rule, the provisions for testing or monitoring $PM_{2.5}$ are not currently adequate.

Under the Clean Air Act, sources are obligated to certify that they are in continuous compliance with emissions limits. Yet sources will be hard pressed to certify—and state and local agencies will, in turn, be hard pressed to verify—compliance with permit limitations when no fully adequate test method for stack emissions of $PM_{2.5}$ has been finalized. Nor do we believe that effective and affordable compliance monitoring methods for $PM_{2.5}$ are yet available.

Moreover, the proposal's discussion of testing and monitoring is almost exclusively directed toward SIP issues of attainment and maintenance rather than source compliance with permit limits. But deficient testing and monitoring (together with

difficulty in bringing appropriate enforcement actions aimed at individual sources of $PM_{2.5}$ emissions) may jeopardize the success of attainment strategies.

a. Straightforward and Accurate Stack Testing Methods for $PM_{2.5}$, Including Condensables, Are Not Readily Available

STAPPA and ALAPCO are concerned about currently available methods of measuring $PM_{2.5}$ particulate emissions. We strongly support inclusion of condensable particulate emissions in implementing the $PM_{2.5}$ standards. Yet, the available test methods for $PM_{2.5}$ and for the $PM_{2.5}$ fraction of condensable particulates are currently problematic. EPA has recommended the use of Conditional Test Method 40 in conjunction with Method 202 to determine $PM_{2.5}$ emissions in nonattainment areas in some cases. However, state and local agencies have expressed concerns that Method 202 cannot separate the $PM_{2.5}$ portion of the condensable emissions in order that the total $PM_{2.5}$ emissions of a source can be accurately ascertained.[2]

And, although we are pleased that EPA is in the process of developing a new dilution-based test method, Conditional Test Method 39, which will apparently measure $PM_{2.5}$ emissions, this method appears to be complex, expensive, and, in cases involving wet stacks, unusable. Despite its drawbacks, however, it may be useful for some sources. We encourage EPA to promptly propose the CTM 39 method as a new 40 CFR Part 51, Appendix M test method. We also encourage EPA to continue to participate in the ongoing American Society for Testing and Materials (ASTM) process to develop more practical alternatives to the measurement of $PM_{2.5}$ for nationwide use.

In the meantime, state and local agencies will need information about how to arrive at enforceable $PM_{2.5}$ emissions limitations through application of correlatives to existing emissions limitations for PM_{10}. Although there is discussion in the proposal of applying multipliers to convert existing emission limitations to a total $PM_{2.5}$ emission limitation, the discussion concludes that "the use of a single multiplier would result in unplanned and variable changes in the stringency in the existing emission limitations." We urge EPA to include in its final rule appropriate multipliers for different industry sectors in attainment and nonattainment areas. State and local agencies must be able to arrive at defensible permit limits for stationary sources that emit $PM_{2.5}$ direct, condensable and precursor emissions. Such limits should be sufficiently accurate for use in enforcement actions—not just as guidelines for SIP attainment strategies.

[2] In the words of the technical consultant Clean Air Engineering as stated on its web site, "at the present time there is no EPA promulgated or proposed reference method for measuring $PM_{2.5}$. Nor is there a generally recognized "off-the-shelf" procedure that has gone through enough industry evaluation to be considered validated… It is possible that valuable information concerning $PM_{2.5}$ could be gained by collecting particulate using Method 5 and determining the particle size distribution microscopically. This would provide an estimate at least of the solid portion of the $PM_{2.5}$. In this case, Method 202 should be incorporated to determine the CPM [condensable particulate matter]. However, the fraction of the CPM that may be attributable to $PM_{2.5}$ cannot be determined."

b. Monitoring Requirements for $PM_{2.5}$ Emissions

STAPPA and ALAPCO urge EPA to include in its pending monitoring guidance, or in its final $PM_{2.5}$ Implementation Rule, specific examples of monitoring for different $PM_{2.5}$ source categories that will assure the state and local agencies, the public and the sources themselves that emissions limits are in fact being met. Although the focus of the proposed $PM_{2.5}$ Implementation Rule is on baghouse leak detectors (BLD) and visible emissions (VE) readings, we believe that neither of those methods provides accurate evidence of source compliance with emissions limits. We encourage EPA to broaden its examination of monitoring methods in the guidance that the agency is developing. (*See* 70 *Federal Register* 66052-66056).

Monitoring methods that are both affordable and reliable may be scarce. PM continuous emissions monitoring (CEMs) is too expensive for many sources, although it provides the most accuracy and reliability. Predictive Emissions Measurement Systems (PEMS) is used increasingly, although it, too, is costly. Continuous Opacity Monitors (COMs) may be useful for some source categories. And parametric limits based on operating and process data values may provide some compliance assurance. With regard to the questions that EPA has specifically asked, we offer the following responses:

1. *Are BLD and PM CEMS reliable, cost-effective methods that are more sensitive than VE techniques for monitoring compliance with PM emissions?*

For monitoring compliance with a PM or PM_{10} standard, BLD and PM CEMS would be more sensitive and would produce data on a continuous basis, which VE observation cannot do. However, there are significant difficulties with both BLD and PM CEMS: First, BLDs will only provide information concerning changes in process or control device performance. Second, BLDs measure only leaks of PM, rather than total emissions associated with $PM_{2.5}$ that would constitute a $PM_{2.5}$ compliance demonstration. Third, neither BLD nor PM CEMs would be considered cost-effective by many sources. Fourth, factors specifically correlating both BLD and CEMS to $PM_{2.5}$ emissions would need to be applied to demonstrate PM2.5 compliance.

In fact, no monitoring method currently measures the condensable portion of $PM_{2.5}$ emissions. It is simply not possible to meaningfully measure $PM_{2.5}$ by VE methods or to use VEs as a method for compliance monitoring due to the condensables and precursors—neither of which can be observed. Only a PM CEMS would produce data that could be used to determine compliance with a PM standard and even that would not be a direct measurement but a correlation.

2. *Will increasing the frequency of VE observations resolve the issue of applicability of VE techniques for monitoring compliance with $PM_{2.5}$ emissions?*

No. This is not a question of frequency. VEs can give only a rough sense of whether a source might be in compliance and cannot be used to monitor changes in

process or control device performance that could affect compliance. VEs cannot actually determine compliance with $PM_{2.5}$ limits. Increased frequency would not help because the technique simply cannot specifically quantify $PM_{2.5}$ emissions. Due to the nature of $PM_{2.5}$ and its formation, monitoring of $PM_{2.5}$ may require the use of PEMS to address the various pollutants comprising the $PM_{2.5}$ emissions. For instance, a source that has direct $PM_{2.5}$, as well as NO_x and SO_x precursor emissions that all contribute to $PM_{2.5,}$ would not be able to monitor compliance with just a PM monitoring technique. By the same token, a NO_x CEMS and/or SO_x CEMS could not be used alone to determine compliance with a $PM_{2.5}$ limit. Therefore, using a PEMS to monitor process variables that contribute to the formation of the various pollutants could be more appropriate for compliance monitoring.

3. *Do we need to mandate through rulemaking a move away from VE techniques for monitoring compliance with $PM_{2.5}$ and $PM_{2.5}$ emissions limits?*

Yes. Guidance and/or a rulemaking is essential. Development of methods for $PM_{2.5}$ compliance monitoring and compliance determinations should be undertaken by EPA. Because Title V requires continuous compliance, we encourage development of a hierarchy or matrix of methods, source types and attainment/nonattainment conditions that assist in choosing the best way to monitor sources for $PM_{2.5}$ emissions. Such a hierarchy should include all methods discussed here and, if possible, new and affordable methods that are under development. The hierarchy should address methods used to monitor changes in process or control device performance to assure continued compliance as well as methods for actual compliance determinations.

c. Collaboration on Improved Monitoring and Testing

EPA has requested submission of "developed examples of improved monitoring, including a description of the measure, monitoring data, etc…. [and] methodologies—complete with equations and explanations for estimating emissions reductions due to improved monitoring…" (70 *Federal Register* at 66056). First, the lowest emissions levels that are practically achievable will, ideally, have been incorporated into the permit for a given source following negotiation with the permitting authority. Although emissions reductions might on occasion result from good monitoring, we do not think that incidental emissions reductions should be the primary purpose of monitoring. Rather, monitoring assures compliance with permit limits, and compliance with permit limits leads to attainment. Monitoring assures that noncompliance is discovered, and that appropriate enforcement actions are taken.

Second, STAPPA and ALAPCO suggest that EPA plan appropriate forums, such as workshops, wherein the state and local agencies would have an opportunity to discuss with EPA the merits of various improved monitoring techniques in a more productive and meaningful way than could be provided by forwarding "equations and explanations." In fact, we have offered our annual Enforcement Workshop as one such forum, and we would be pleased if EPA were able to attend and commence a productive dialogue on test methods and monitoring of $PM_{2.5}$ emissions.

IX. Emissions Inventory Issues

Although state and local agencies are pleased to give our initial reactions to the questions raised in the proposed $PM_{2.5}$ Implementation Rule, it is our understanding that EPA will attempt whenever possible to consolidate emissions inventory rules and guidance in the Consolidated Emissions Reporting Requirements (CERR), which are now being revised and renamed as the Air Emissions Reporting Requirements (AERR). The public comment period is now underway for the AERR rule, and comments are due in April. It would be preferable and consistent with past practices—and our mutual goal of consolidation of inventory requirement—for EPA to pose the $PM_{2.5}$ implementation inventory-related questions in the AERR. Thus, although we will include our initial reactions here, we will expand upon them in our AERR comments.

First, it would be helpful if EPA were to describe the approval process that the $PM_{2.5}$ emissions inventory must go through when it is submitted as a part of the SIP,and subject to public hearing and EPA approval as a SIP element.

Second, although we believe that more detail concerning control equipment within all parts of emissions inventories would be helpful, we invite discussion with EPA concerning whether the additional burden on industry compared to the benefit to the state and local agencies would warrant requiring this data. We will provide a more definite answer in the context of the AERR comments, following further examination of the benefit to the inventory of having more information on RACT (and other) control devices.

Third, it would be beneficial to require VOC speciation at a minimum in order to see what reactive VOCs there are for keeping track of ozone issues. Even better, AERR should require hazardous air pollutants (HAPs) and toxic air pollutants (TAPs) reporting in order that the state and local agencies and EPA can better study toxic hotspots and the formation of ozone.

Fourth, EPA should not require state and local agencies to collect and submit data on area and mobile sources. However, many state and local agencies will continue to run the MOBILE model and calculate area source data as appropriate since the model runs and calculations are useful for SIP and maintenance plan work, studies in specific airsheds, and even, on occasion, for public records requests.

Fifth, as far as other inventory activities that EPA should undertake, STAPPA and ALAPCO strongly encourage EPA to undertake a comprehensive study of ammonia and its relationship to $PM_{2.5.}$

Finally, we encourage EPA to require a level of detail in the AERR that will be sufficient for future SIP submissions. In this way, state and local agencies can obtain all necessary emissions data from industry in a one-stop-shop information request.

X. Exclusion for Military Activities

In section III.E.3, EPA states that "[i]n addressing a nonattainment area having military training, testing and operational activities occurring within it, the State should not need to target these activities for emission reductions." STAPPA and ALAPCO oppose a categorical exclusion for these types of military activities, which could be significant contributors to $PM_{2.5}$ pollution in a nonattainment area. If for national security reasons such activities cannot be curtailed, the President is empowered to grant an exemption under the Clean Air Act section 118(b).