Recommendation 4: The PSD WORKGROUP recommends that EPA work with states and FLMs to develop a menu of acceptable emissions calculation approaches and guiding principles for use when preparing emissions inventories for cumulative PSD increment analyses.

***Comments**: To the extent that this recommendation has general applicability in determining cumulative PSD increment consumption, there are a number of troubling implications in the discussions and rationale presented in support of the specific recommendations. These discussions and the recommendation fail to recognize the sound basis and historically acceptable approach of using the maximum allowable or permitted emission rates as the preferred approach in modeling both NAAQS compliance and PSD increments not only for the source seeking a PSD permit, but also for the set of nearby sources which need to be explicitly modeled in a cumulative analysis. The issue is specifically critical for the short term averaging periods for SO2 and PM10 increments. In many instances the determination of these limits, in addition to BACT requirements, are driven by modeling results and these form the basis of short term enforceable permit limits for PSD sources. These same limits should be the basis for any future modeling for these sources to demonstrate both NAAQS compliance and PSD increment consumptions, with the exception that in those cases where "actual" maximum emissions are demonstrated to be below these limits and are consistent with the sources long term operations, these latter actual emissions can be used. The use of actual maximum emissions is in fact consistent with the current EPA recommendations on increment modeling. Thus, any recommendation which deviates from current practice needs to be fully supported and demonstrated to be technically defensible. Unfortunately, this recommendation falls short of that requirement.*

Presumably, there is implicit agreement on the part of the recommendation that the source seeking a permit must be modeled using its maximum allowable emission rate. For the set of nearby sources to be explicitly modeled, the current guidance on the appropriate emission rates to be used for short term NAAQS and PSD increment calculations are found in the Guidelines on Air Quality Models (Table 9-2 of Appendix W of 40 CFR Part 51) and the New Source Workshop Manual (Section C), respectively. These guidelines have been reconfirmed on numerous occasions in EPA determinations and state permit actions as the technically acceptable approach in calculating cumulative impacts. The guidance calls for the use of maximum allowable, permit limiting, or maximum actual emissions (under certain conditions) in the cumulative analysis and any deviations, including those discussed in this recommendation, have to be explicitly shown to be as technically defensible as the use of the maximum allowables in calculating short term impacts.

For NAAQS compliance demonstrations, the use of the maximum allowable or permit limited emissions is not being questioned since these are codified in the Modeling Guidelines and determination of short term impacts using the maximum short term emissions from nearby sources is standard practice. There is a very good technical basis for the recommendation to use maximum emissions. Any modeler understands that in order to predict the "likely-hood" of a maximum or HSH impact over a threshold with a short term averaging time, the emissions must be representative of these same averaging periods and have to also bet "represented" during the potential meteorological conditions causing these high impacts. This conjunction of emissions and meteorology allows the proper identification of the combination of the "worst case" set of meteorological conditions (over a 5 year period) and the various source parameters. That approach hold whether one calculates the impact of the source seeking a permit or in combination with other sources. The same technical rationale holds not only for short term NAAQS compliance demonstration, but also for PSD increments. The

recommendation recognizes that the NSR Workshop Manual references the maximum actual emissions (in lieu of maximum allowable or permit limits) for use in determining the short term emissions from existing PSD increment affecting sources, but then goes on to recommend methods of emission inventory calculations which clearly would result in underestimation of the PSD increment consumption. For example, the argument provided in the recommendations to use average rates rests with certain wording in the PSD regulations which calls for the use of actual emissions which in this instance is equated to "average" emissions.

However, these arguments are misplaced. The reference to the "definition" of actual emissions at 40 CFR 52.21(b)(21)(ii) as equating to average rate should also recognize that in other sections of the definition of "actual emissions" reference is made to allowable emissions (e.g. at 40 CFR 52.21(b)(21)(iii) and (iv)): "the Administrator may presume that source specific allowable emissions for the unit are equivalent to the actual emissions of the unit." The use of average emissions in applicability and netting determinations are commonplace, but these do not establish the use of that specific definition for other aspects of the PSD program. More germane to modeling is that allowable emissions are specifically referenced in the section dealing with source impact analysis at 40 CFR 52.21(k) where the proposed source and "all other applicable emission increases and decreases" are to be assesses. If the intent of the PSD regulations was to allow for the use of average emissions in all PSD increment calculations, then there would not have been a need to establish short term increments beyond the annual ones since these latter increments would be controlling.

Another general comment of the recommendations is that a menu system of acceptable emission calculation approaches will work only insofar as all of the choices are able to serve the end purpose of demonstrating technically defensible calculations, which clearly establish that PSD increments will not be exceeded. This assurance, for example, is used in the Modeling Guidelines in recommending a set of modeling approaches in certain settings wherein all of the approaches have been deemed to provide for acceptable projections, with various degrees of conservatism. However, the methods describe in this recommendation could easily lead to underestimations of PSD short term increment calculations and will not result in the prerequisite showing that a source will not cause or contribute to an increment exceedence. Short of this, the set of methods need to have a hierarchy, starting with the technically viable approach of using the allowable, permit limiting, or maximum short term emissions. Instances where a refinement of these emissions are technically defensible can be considered on a case-by-case basis by the regulatory agency, but these should be made the exception, not the rule.

More specific comments on some other aspects of the various sections of the recommendation are presented below, following the section.

Description: The PSD WORKGROUP recognizes that there will be situations where PSD screening analyses of increment consumption indicate that more refined analyses are necessary to determine whether the increment may be exceeded. The PSD WORKGROUP believes that it is desirable to encourage consistency, predictability, and regulatory certainty with regard to acceptable approaches for preparing emissions inventories for refined PSD analyses, while recognizing that it is also important to afford permitting authorities some flexibility to ensure that analyses accommodate considerations such as data availability and accuracy with regard to actual air quality status. The PSD WORKGROUP believes that the overall goal of refined analysis should be to understand what is actually occurring with regard to the status of air quality in a defined area, or potential status of air quality in the case of permitting activities. The PSD WORKGROUP further believes that this goal is consistent with EPA's stated preference for the use of actual emissions when conducting PSD analyses.

To support these goals, the PSD WORKGROUP recommends that a menu of acceptable emissions calculation approaches be developed and approved by EPA, EPA Regional Offices, other permitting authorities, and Federal Land Managers (FLMs). The PSD WORKGROUP further recommends that permitting authorities be allowed to select what they believe to be the most appropriate emissions calculation option from the approved menu based on their consideration of the principles articulated below. The PSD WORKGROUP believes, however, that any given option in the menu may not be appropriate in certain circumstances to be determined by the permitting authority on a case-by-case basis by applying the principles. Selection of emissions calculation methods should seek to:

1. conform to the Clean Air Act, federal PSD rule, and other applicable laws and rules; --
2. maximize the accuracy of the method(s) in reflecting the actual status of air quality;--
3. ensure consistency between emissions calculations methods used for sources in the baseline emissions inventory and the current emissions inventory
4. ensure that selected methods are practical given the availability of and permitting authority access to emissions data;-***Practicality does not translate to capitulating to technically unsupportable methods. There are means to establish the maximum actual or permitted emission rates from the vast majority of sources which consume PSD increment. The NSR Workshop Manual recognized that the development of an emission inventory for a cumulative analysis is the responsibility of the source applicant. Thus, in New York, the applicants are required to develop source specific emission parameters using proper source characteristics (Air Guide 36: "Emission Inventory Development For Cumulative Air Quality Impact Analysis"). This includes visiting sources (with DEC staff oversight) to check on the maximum rated capacity of the boiler, etc.***
5. support fairness and consistency in how emissions are calculated for various source types across and within states; and
6. support key air quality management objectives that states and EPA are seeking to achieve, such as encouraging sources' use of continuous emissions monitoring systems (CEMS) and discouraging sources from seeking more permitted air quality increment than they may need— ***not sure what the second part means, but most source are not concerned with how much increment they consume as long as it is within the regulations. It is the state/EPA's responsibility to manage the increments***.

The PSD WORKGROUP believes that ambient monitoring can enable permitting authorities to assess the most accurate emissions calculation approach (see the second principle above) from the approved menu in situations where monitoring data are available.

Comment: There is currently a sound, simple and uniformly applicable approach which has been the basis of supporting modeling analysis for PSD permit applications and which provides the desired consistency and regulatory certainty in refined cumulative analysis. Inventory emission calculation methods have very limited relationship to "what is actually occurring" in air quality of an area since air quality monitoring data, even if collected properly, is a very poor indication of PSD increment status (either consumption or expansion: see comments to Recommendation 12). Monitoring data cannot even establish the PSD increment status so it's not even clear how it would start to establish the "most accurate" emission rates. Allowing for consistence and at the same time allowing for flexibility in the choice of the emission calculation methods is not workable when these methods contain technically indefensible approaches.

The PSD WORKGROUP believes that the following approaches should be included in the menu of acceptable methods for calculating major and minor point source actual emissions for inclusion in emissions inventories used in PSD modeling analyses.

In situations where continuous emissions monitoring (CEM) data are available[1] (with no implications of a hierarchy:

1. use short-term maximum emissions for the entire plant over a 2-year period
2. determine maximum short-term emissions from each source at the plant;
3. determine short-term emission rates and sort them, then determine representative rates, such as an upper percentile, as the single short-term emission rate for modeling;
4. use CEM data to determine actual emissions as defined by rule and explained by EPA in the preamble to 1980 PSD rule revisions, or
5. use hour-by-hour CEM data in the model.

Comment: If the source has short term limits, these should be used, unless it can be demonstrated that the maximum calculated by the above methods are the consistent "normal" source operations. CEM data is available only for SO2 and NO2 in minority of sources and not at all for PM10. In N.Y., about 5% of state facilities and 20% of Title V facilities have CEM data and the percentages for PSD affected sources are likely only a little higher. The use of CEM data needs a hierarchy since method 2, where the maximum per source is determined, is preferred over method 1 since a facility-wide short term rate can results in underestimation of emissions from certain individual sources which could be the sources of importance in the needed modeling demonstration. In addition, methods 3and 4 could be acceptable under certain limitations (i.e. in instances where the hourly variations in emissions are clearly and consistently part of the operations of the source and have been demonstrated to be consistent at these levels over few years of operations). Method 4 is not clear or doesn't seem supportable.

In situations where no CEM data are available, but where there are data that can be used to calculate actual emissions (with no implications of a hierarchy***):-- <u>Comment:</u> in most instances CEM data will not be available and for PM10 there is no such data. Thus, these optional methods should be viewed in relationship to method 4 below, which is currently the only technically defensible one for short term impacts. Annual or average emissions, especially over a limited two year period, cannot establish proper short term increment consumption and is contrary to EPA's and States' approach used over the last two decades. Thus, methods 1 to 3 are problematic.***

1. average two years actual annual emissions representing normal operations surrounding the baseline date and date of analysis for current emissions, and divide by annual operating hours
2. calculate emissions from production data from the two years prior to the baseline date or date of analysis for current emissions (emissions calculated using valid emissions factors and methods);
3. use two years of emissions data, which may be before or after the baseline dates, which have similar facility configuration that would be representative of baseline emissions; or
4. use of allowable emission rates, including use of regulatory limits, where appropriate

[1] CEM data can be used to calibrate AP-42 estimates to calculate baseline emissions; however, AP-42 may underestimate baseline emissions. Acid Rain Program CEM data may be conservative as it cannot be adjusted downward to match the test reference method results.

Permitting authorities should also have the ability to use emissions calculations methods that are not included in the proposed menu provided that they are able to demonstrate to EPA that the approach is consistent with the law and rules as well as with the principles articulated above.

For area and mobile sources, the following sources of information are acceptable options to use for calculating emissions for inclusion in PSD emissions inventories:

1. AP-42 emission factors, mass balance calculations, site-specific emission factors, industry emission factor, emission models; and/or
2. use of population surrogates for estimate of mobile and area sources.[2]

The PSD WORKGROUP recognizes that permitted (or allowable) emissions may be appropriate to use in situations where no other information about actual emissions is available.

Rationale: Several states expressed concern regarding the current lack of clarity and sometimes narrow interpretations of the definition of actual emissions used for purposes of calculating point source emissions for inclusion in emissions inventories for PSD analyses. All Workgroup representatives agreed that it is desirable to bring greater clarity and consistency to acceptable approaches for conducting refined analyses, particularly related to acceptable approaches for calculating point source emissions. Participants indicated that agreement between EPA, EPA Regional Offices, FLMs, and permitting authorities on acceptable emissions calculation approaches could be highly useful in minimizing the occurrence of protracted, case-by-case negotiations as more jurisdictions find the need to conduct refined PSD analyses.

Several state Workgroup representatives indicated that there are a range of interpretations that can be drawn from EPA regulations and guidance regarding appropriate approaches for calculating actual point source emissions in the context of PSD program implementation. Current PSD regulations state that, in general, actual emissions are to be used for determining baseline concentrations. Actual emissions are defined in 40 CFR 52.21(b)(21)(ii) as "the average rate, in tons per year, at which the unit actually emitted the pollutant during a two-year period which precedes the particular date and is representative of normal source operation." This definition goes on to state, "Actual emissions shall be calculated using the unit's actual operating hours, production rates, and types of materials processed, stored, or combusted during the selected time period." However, the draft 1990 NSR Workshop Manual ("Puzzle Book") states, on page C.49, that baseline emission rates are the maximum actual emissions rates (highest occurrence) for that averaging period during the previous two years of operation.

In determining baseline emission rates, the 1980 preamble {45FR at 52718, col. 3} states that, "EPA believes it is generally appropriate to presume the source will operate and emit at the allowed levels" and that, "When EPA or a state devotes the resources necessary to develop source-specific emissions limitations, EPA believes it is reasonable to presume those limitations closely reflect actual source operation. EPA, states, and sources should then be able to rely on those emissions limitations when modeling increment consumption." In this discussion, EPA also cautions that "The presumption that federally enforceable source-specific requirements correctly reflect actual operating conditions should be rejected by EPA or a state, if reliable evidence is available which shows that actual emissions differ from the level established in the permit." Several states noted that many point sources typically operate well below permitted levels.

[2] See USEPA Guidance document from 1993 on estimating increases in NO2 for PSD increment analyses.

Comment: It's not clear what the point being made is. Source applicants accept permit limits derived by BACT and/or modeling, but always want to make sure there is a "safety factor" in their permit limits and , therefore, overstate the actual values to be realized. In most instances applicants do not even want any annual caps on operations, unless they can avoid certain applicable requirements. Thus, it should not come as a surprise that sources operate below their permitted limits. If an agency thinks that the source can operate well below the proposed limit or is in fact operating well below their permitted limit, it's then the agency's responsibility to fix the permit limit to better reflect these "actuals". The claim that somehow using actual emissions will encourage better air quality management and would discourage the side effect of a source seeking more increment than necessary (last listed item in the recommendation) is a red herring. In the last two decades of PSD regulation implementation, no source in New York has voluntarily come in and asked for less increment consumption by proposing an emission limit below the BACT requirements or maximum increment consumption if that was the result of their proposed limit. That is why, for many years NY State had a 75%/25% of short term/annual remaining increment consumption cap on individual sources. The second statement quoted above only indicates that EPA and the States have an obligation to reject a permit limit if actual emissions do not substantiate it. Thus, the use of certain emissions, such as average emissions will not encourage anything, but the underestimation of the short term increment consumption.

The range of possible current interpretations of acceptable approaches led several Workgroup participants to propose the development of a menu of acceptable approaches for calculating actual source emissions. The proposed menu approach also recognizes that various factors can affect the extent to which a particular actual emissions calculation method would be appropriate to use. Rather than articulating a single acceptable approach or a hierarchy of acceptable options, several Workgroup representatives indicated that they believe that it would be more useful to develop an approved menu of equally-acceptable emissions calculation methods, along with a set of principles that should govern selection among them given the circumstances. Background discussion related to the principles is summarized below.

Some Workgroup participants expressed concern that the "menu of options" approach to selecting appropriate emissions calculations methods could open some states to challenges to or second-guessing of a permitting authority's decision by EPA or a court. In states where permitting authorities are not allowed to be more stringent than federal law or rule requires, a menu of "equally-acceptable" options could limit states' latitude in selecting what they deem to be the most appropriate option, particularly in the event that their selected option would result in more stringent emissions control requirements than would an alternate approach on the menu. For this reason, to make the menu of options approach work, it will be necessary for states and EPA to develop an acceptable framework that grants states the flexibility to select from the menu of options without creating a situation where selected approaches are frequently subject to EPA or court challenge. One strategy would be to clarify that any given option may not be appropriate in certain circumstances to be determined by the permitting authority on a case-by-case basis by applying the principles. In addition, states could work with EPA to clarify in a rule some of the conditions and circumstances that might influence the appropriateness or inappropriateness of a particular menu option.

The second principle directly addresses the Workgroup's belief that the goal of PSD analyses should be to understand, as accurately as possible, actual changes in the status of air quality. Several state representatives indicated that various factors can affect the extent to which a particular actual emissions calculation method is appropriate to use. For example, source type, and the extent to which there are significant seasonal or temporal fluctuations in actual emissions,

can influence decisions about which emissions calculation approach would be most appropriate for a particular source. Availability and quality of emissions data and assumptions that must be made where not historical data are available will also affect the chosen emissions methodology. Some states have found that ambient monitoring data, where representative data are available, can be useful in helping to determine which emissions calculation method would best reflect actual changes in air quality status.

Comment: The goal of PSD analysis is to assure compliance with PSD increments. An accurate representation of changes in air quality for PSD purposes has not and cannot be realized by monitoring data. That is why it has been rejected number of times by EPA. Such an approach does not fully understanding why dispersion modeling has been so extensively used in PSD increment calculations..

The third principle, addressing the need for consistency between emissions calculation methods used for baseline and current year emissions, seeks to minimize the impact of modeled emissions changes that are purely an artifact of using different calculation methods for the baseline date inventory and current date inventory. Furthermore, the 1980 preamble {45FR at 52718, col. 1} states, "Increment consumption or expansion is directly related to baseline concentration. Any emissions not included in the baseline are counted against the increment. The complementary relationship between the concepts supports using the same approach for calculating emissions contributions to each." In other words, participants agreed that there should be an apples-to-apples comparison.

The fourth principle recognizes that there are limitations in the feasibility of pursuing particular emissions calculations approaches in certain situations. For example, many major and minor sources do not have CEM data or short-term emissions information. In these cases, there must be flexibility to use an emissions calculation approach that is appropriate and reasonable for the resources available. The availability of short-term actual emissions data for minor and area sources that are not required to report these emissions annually may be sparse. In these cases, the states may have to develop unique methodologies to estimate short-term emissions rates that are specific to various source categories. For these minor and area sources, there is no universally acceptable and appropriate methodology, so states must have flexibility in emissions inventory development.

The fifth principle addresses some Workgroup participants' stated desire to ensure that sources are addressed in an equitable manner with regard to how their emissions are calculated for inclusion in PSD emissions inventories. For example, Workgroup participants indicated that significant differences can occur when emissions from one source are based on CEM data and the emissions from another source are based on allowable emissions. While the Workgroup recognized that data availability will be a primary driver of the type of emissions calculation approach used for a given emissions source, Workgroup members expressed a general desire to calculate emissions similarly for comparable emissions sources within emissions inventories. Workgroup representatives indicated that such consistency is particularly important in the context of emissions inventories for PSD analyses that involve multiple jurisdictions.

The sixth principle is designed to prevent adverse side effects that could be associated with the use of a particular emissions calculation approach. Workgroup participants identified the following side effects that would be desirable to avoid through their selection of an appropriate emissions calculation approach:

- undermining efforts to ensure consistency in emissions calculation approach across source types, particularly in the context of multi-jurisdictional PSD analyses;
- undermining efforts to achieve equity and consistency with regard to how source emissions are calculated for inclusion in emissions inventories;
- discouraging sources from adopting CEM systems or performing facility-specific emissions testing;
- discouraging sources from maintaining emissions records not explicitly required by permit; and
- encouraging sources to seek more permitted increment-consuming emissions than they are likely to need

Recommendation 12: The PSD WORKGROUP recommends that EPA explicitly acknowledge the roles that ambient monitoring information can play in PSD program implementation.

Comments: Although the recommendation seems to be merely asking for EPA to better define the role which monitoring data can play in the PSD program, some of the specific references to potential uses of monitoring data are not consistent with neither longstanding PSD program implementation steps nor are most of the arguments technically sound. During the conference call to discuss this recommendation, it was indicated that the Workgroup members consider monitoring data as supplemental information to decision making in the PSD program. However, the discussions and statements in this recommendation (and also in # 4) could be interpreted far more general and need to be addressed. The descriptions below do identify some of the limitations of using monitoring data in specifically noting the influence of proper site locations, the effects of other than PSD sources, and meteorological data variability. These limitations are not the only ones which highlight the concern with using monitoring data in determining PSD increment consumption or expansion.

In the initial stages of implementing the PSD program, EPA did recognize the role of monitoring data in establishing the baseline concentrations and the determination of whether the full PSD increments were available in a baseline area at the time of the minor source baseline triggers (as noted in the NSR Workshop Manual). Beyond that, the use of monitoring data in PSD increment determinations was discouraged and disallowed for obvious technical reasons. EPA has, thus, held that monitoring has little or no place in increment determinations. For AQRV assessments, monitoring data has been used to establish whether a certain AQRV has reached a concern level or threshold value (such as the "red line" aquatic impact and Ozone determinations in some of the Class I areas by the Forest Service). These determination, however, have been made in recognition that it is the total loading which determines these effects and that such total loading includes both PSD and non-PSD sources, plus "natural" effects. On the other hand, for AQRVs such as visibility, the FLMs have attempted to identify quantifiable levels to determine not only these thresholds, but also "significant effect" levels. The difficulty in establishing the latter level is reflective of the inability of any monitoring data to determine source contributions in the PSD source review process and their "significance".

The recommendation suggests that in some instances monitoring data can be used to assist in the PSD program. One of these areas is in encouraging permit authorities to validate model performance when representative data is available. Leaving the question of just how this representative data would be carried out in the "complex mix of sources and other factors", it is highly unlikely that state or local agencies would want to undertake model validation efforts, even if they are technically capable. Model validation is a very rigorous process, in most instances requiring a large set of well placed monitor sites and even under these conditions it has been consistently shown that model validation reduces to the ability to, at best, match the higher unpaired time-space concentrations in a very well controlled experiment. In most instances, such model validations are more akin to model "calibration", which has been contrary to the EPA Modeling Guidelines for a long time for good technical reasons. Even with these model "calibrations", the results only indicates whether a specific model application "matches" observed data. The recommendation wants to even go beyond this step and presume that such an analysis can establish whether PSD increment affecting sources have had a discernable effect on the existing air quality. This step only adds to the complexity of the

question. Furthermore, it is also asserted that this sort of an analysis can be used to guide the determination of a PSD source emission inventory, but just how one would achieve that goal is left very unclear.

Even under ideal monitor data gathering conditions, the data will only be able to establish whether a threshold such as a standard is being exceeded, but it cannot establish whether a "significant" deterioration (or improvement) or some portion of it has occurred due to existing PSD sources. This is not only because the monitoring data are affected by more than the subset of PSD sources in the area, but also because the contribution of these sources cannot be established to any degree with simple assessment of monitor data "trends". Assuming one can site monitors reflect the impacts of all of the important PSD sources, even an observation of "no changes" in these levels does not establish that PSD increments were not consumed. In many instances monitored data levels are seen to be above PSD increments and any assessment will then need to establish that all of the events observed (say, 24 hour values corresponding to a 24 hour increment) have not been affected above the PSD increments (or some portion of it) on both time and space scales which include the consideration of similar weather conditions. Furthermore, in Class I areas, a majority of SO2 and PM10 monitors have a "sensitivity" level close to the 24 hour PSD increments of 5 and 8 ug/m3, respectively, and could be hard pressed to establish any trends in PSD increment consumption. This type of assessment would then resemble the high order statistical assessments which have been tried recently to establish that years of control strategies have in fact resulted in improvements in Ozone trends, even though other forms of "casual" observations say something different.

Beyond these technical limitations, the practical reality is that states have limited resources for general monitoring for even standards compliance demonstration as more of the NO2 and SO2 monitor sites are being replaced by other pollutant monitoring. Even PM10 monitors are essentially being replaced by PM2.5 monitors and EPA's current thinking is to considerably reduce the mandated/funded monitoring sites through their proposed Ncore network proposal. Thus, it is highly unlikely that any substantive data will be available in most instances to help establish PSD increments or even AQRV affects. Presumably to counter act such limitations, the recommendation suggests that pre or post construction monitoring can be realigned for such purposes. However, the trend in PSD permitting has been to minimize the need for such monitoring, not only by permit applicants, but also by regulatory agencies when the criteria in 40 CFR 51.21(i)(8) are met. That was one of the reasons for EPA's proposed streamlining of onsite monitoring requirements in the 1996 proposed PSD rule changes.

The recommendation also notes that the monitoring data can be useful in establishing whether a detailed Periodic Review is necessary for a given area. Since there are a number of ways and levels by which such a determination can be made, as recommended in #2, it should be left to these limited cases to try to establish if monitoring data is useful for such a purpose. Such narrowly defined situations do not appear to be the basis of this recommendation, however.

Description: The PSD WORKGROUP recommends that EPA explicitly acknowledge the use of ambient monitoring information as a legitimate tool in the PSD program implementation toolbox, when used under appropriate conditions. The PSD WORKGROUP does not expect monitoring data to replace the use of modeling activity in the PSD Program. The PSD WORKGROUP believes, however, that a range of opportunities exist for increasing the use of ambient monitoring data to complement the use of air quality models in situations where representative data are available. In many cases, States have been reluctant to use monitoring data in the absence of clear recognition that such data have a legitimate role in increment and AQRV analysis.

The PSD WORKGROUP believes that there are steps that can be taken to increase the use of ambient monitoring data in current PSD program implementation. Ambient monitoring data can be used in certain circumstances to assist with the evaluation of air quality models. In the context of Periodic Review, trends in ambient monitoring data can be used as a tool to support the screening approach discussed in Recommendation 2, helping to indicate whether a cumulative increment modeling analysis may be needed for an area. In situations where an airshed may have a complex mix of sources or other factors affecting increment consumption, permitting authorities should be encouraged to validate model performance using ambient monitoring data, when representative data are available. Ambient monitoring data may also be useful to guide permitting authority selection of appropriate emissions calculation methods for use in preparing PSD emission inventories, as discussed in Recommendation 4. In the context of AQRV analysis, monitoring data can be useful for assessing the AQRV impacts associated with actual ambient pollutant concentrations. It should be noted that the PSD WORKGROUP does not propose that it is appropriate for ambient monitoring to replace the role of modeling in PSD program implementation. Instead, the PSD WORKGROUP believes ambient monitoring information should be allowed to inform the PSD program decision-making process in a manner similar to how modeling information is used, when used under appropriate conditions.

The PSD WORKGROUP also believes that opportunities exist to expand the use of ambient monitoring data in future PSD program implementation. Several states identified opportunities to more effectively utilize pre-construction and post-construction ambient monitoring requirements imposed as part of major source permitting actions. For example, permitting authorities could adjust monitoring regimes to better align with increment analysis needs. In addition, there is the potential to use temporary ambient monitoring networks to track pollutant concentrations in "problem areas" where increment is close to being fully consumed. This approach could supplement the use of modeling information in informing program decision-making.

The PSD WORKGROUP believes that it is also important to recognize the limitations of ambient monitoring data as well as conditions that can constrain its usefulness. One constraint pertains to the location of ambient monitoring stations relative to modeling receptors or emissions sources. Additional constraints can be the absence of ambient monitoring data at the baseline date and the inability of ambient monitors to distinguish between impacts on concentrations from baseline source emissions and emissions from increment consuming sources. In some cases, it can be difficult to infer too much about increment consumption from trends in monitored concentration levels because of variability in meteorological conditions from year to year. Despite the constraints, the PSD WORKGROUP believes that there are important roles for ambient monitoring data in the increment analysis process.

Rationale: Workgroup participants expressed a desire to consider conditions under which the use of ambient monitoring data would be appropriate and useful in the context of PSD program implementation. Several state representatives indicated that the use of monitoring data is becoming increasingly important as some areas are nearing full consumption of increment. Some participants acknowledged that the need to base permitting decisions on sound science can make it difficult for permitting authorities to deny permit applications in situations where actual ambient air quality has not been assessed or where ambient monitoring data suggest significantly different air quality status from modeled results.