

August 3, 2007

Attention: Docket ID No. EPA-HQ-OAR-2006-0888,
U.S. Environmental Protection Agency
EPA Docket Center (EPA/DC)
Air and Radiation Docket
Submitted via email to a-and-r-docket@epa.gov
Washington, DC

To: EPA Docket ID No. EPA-HQ-OAR-2006-0888

RE: Prevention of Significant Deterioration New Source Review: Refinement of Increment Modeling Procedures; Proposed Rule

The Northeast States for Coordinated Air Use Management (NESCAUM) has a strong interest in all aspects of the New Source Review program including proper methods for the calculation of increment consumption under the Prevention of Significant Deterioration (PSD) provisions of the program. To this end, we are submitting comments registering our concern with many aspects of the proposed rule published at 72 Fed. Reg. 31371-31399 (June 6, 2007). Specifically, we have an interest in the following issues raised by the June 6 proposed rule:

1. Proposed clarifications regarding the effects of the draft New Source Review (NSR) workshop manual;
2. Proposed clarifications on the application of types of meteorological processors, required years of meteorological data use, and the use of "worst case" meteorological data year in subsequent modeling;
3. Treatment of sources with an FLM variance from Class I increments in subsequent increment consumption modeling;
4. Emission estimation methods for increment modeling;
5. WESTAR-recommended approach for the determination of actual emissions for modeling of short term increments and associated guiding principles; and
6. Assumptions regarding multiple inventory sources operating at maximum emission rates throughout the year.

On each of these issues, we agree with the substance of the comments submitted by the New York State Department of Environmental Conservation (NY DEC) to this docket and support the positions taken by this agency. Its comments on this proposal are attached here (without appendices) and we support NY DEC's proposal that determination of emissions for short term increment calculations be based on the following hierarchy:

1. Use allowable emissions if data to properly quantify actual maximum emissions are not available or cannot be substantiated by the permitting agency. Using the allowable emission rate as the first entry conforms to the presumptions found in the PSD regulations at 40 CFR 51.166(b)(21)(iii) and 51.166(k), but can be bypassed if valid short term actual data are available.
2. Use maximum actual emissions calculated per guidance in section IV.D.4 of EPA's draft *NSR Workshop Manual*. If CEM data are used for this purpose, then the maximum or upper percentile values have to be determined per individual sources and not as an average for the facility.
3. Use hourly CEM data only to the extent that the concerns on the representativeness of the CEM variability over time of day and year can be overcome.

If you have questions regarding these comments, please contact Gary Kleiman on my staff (gkleiman@nescaum.org, 617-259-2027).

Sincerely,



Arthur N. Marin
Executive Director

Cc: NESCAUM Directors
NESCAUM Permit Modeling Committee

Attachment: NY DEC Comments to EPA Docket ID No. EPA-HQ-OAR-2006-0888

NYSDEC Comments on:

EPA's Proposed rule for Prevention of Significant Deterioration (PSD) New Source

Review: Refinement of Increment Modeling Procedures.

Federal Register, June 6, 2007 (Docket ID No. EPA-HQ-OAR-2006-0888).

72FR31371

In this proposal, EPA is attempting to refine aspects of the PSD regulations and to re-define certain terms which it finds were previously lacking, unclear or no longer in line with its interpretations of the Clean Air Act with respect to calculations of PSD increments and the applicability of Class I increments under specific circumstances. In addition, EPA would like to replace previous interpretations in existing EPA guidance documents which are deemed inconsistent with its current thinking. Certain of the proposed revisions and schemes are to be codified in the corresponding PSD regulations at 40 CFR 51.166 and 52.21. On the other hand, some of the discussions in the proposal do not lead to any regulatory change, but are apparently meant to clarify EPA's positions on the status of guidance documents and provide further guidance on topics such as meteorological data and model usage. One of the major changes EPA would like to make is to incorporate in existing or new sections of the PSD regulations recommendations from the Western States Air Resources Council (WESTAR) on how emissions should be calculated in PSD increment modeling analysis.

There are eight topics in the proposal which are summarized in Section III (page 31379) of the Federal Register Notice (Dated June 6, 2007, pages 31371-31399) on which EPA is seeking comment, but these can be broken down to the following three areas:

1) Status and usage of: i) EPA's "*New Source Review (NSR) Workshop Manual*"; ii) certain meteorological data bases and data processors; and iii) proprietary softwares and data. Comments are solicited on EPA's positions as outlined in the proposal, but no regulatory revisions are planned.

2) Treatment of sources which have previously received Federal Land Managers (FLMs)

“variances” under the PSD requirements applicable to Class I areas in future PSD increment analyses.

3) Procedures, data and source types to be used to estimate emissions from increment consuming or expanding sources, with emphasis on defining actual emissions for short term periods (24 hour or less). Many aspects of the proposal’s outline are in accord with the recommendations from WESTAR on improving the PSD program.

Our comments are mainly directed at specific details of the proposal related to items (2) and (3), but we will also provided comments on the issues in item (1) dealing with the status of guidance contained in the NSR Workshop Manual and on EPA’s clarifications for prognostic meteorological models use for dispersion analysis. EPA’s aim in this proposal is to provide greater clarity on the issues discussed and to achieve the recommendation by WESTAR of finding a balance between flexibility granted to states in case by case determinations and, concurrently, achieving national or regional standardization necessary to ensure equality among states. We agree with WESTAR’s and EPA’s desire for such a balance, especially when dealing with important issues involving cross-jurisdictional analysis approaches which arise in many PSD Class I assessments.

We believe that such a balance has been achieved in the past in many regions of the country when the involved agencies, including states, EPA and the Federal Land Managers of Class I areas, have developed and agreed upon a set of standard approaches to analyzing impacts on Class I areas. Such cooperation between the regulatory agencies is best exemplified by the Interagency Workgroup on Air Quality (IWAQM) which developed modeling guidance specific for addressing Class I area impacts, starting in the early 1990's that lead to the adoption of a regional approach to Class I area by the Northeast States for Coordinated Land Use Management (NESCAUM) states. The IWAQM process was subsequently augmented by the Federal Land Managers’ Air Quality Related Values Workgroup (FLAG), starting in the late 1990s. As discussed below, we believe some of EPA’s proposed clarifications are best addressed through these forums.

On the other hand, issues dealing with how emissions and other source parameters are used in PSD permit modeling, whether for Class I or Class II areas, are best addressed within the context of the experience and expertise of state and EPA modelers who have been instrumental in the development of these methodologies and guidance over the past thirty years. Merely referring to a specific definition or a term in regulation and to certain arguments implicitly extracted from the Clean Air Act should not serve as the sole basis of establishing new guidance or regulatory change when these latter fly in the face of both the Act as well as technically sound judgement. Unfortunately, that is exactly what we find, in the main, with this proposal. In addition to proposing technically unfounded approaches, this proposal is replete with EPA's attempt to justify approaches which seem to be more in line with its prejudged conclusions rather than an objective consideration of the issues in light of comments previously received from NESCAUM states, and without recognition of concerns expressed by National Association of Clean Air Agencies, NACAA (formerly STAPPA and ALAPCO) with certain aspects of the WESTAR recommendations.

Our specific concerns are detailed in the sections that follow. We believe that unless EPA significantly modifies this proposal or abandons many aspects, EPA will have abdicated its responsibility to protect the air quality in the more sensitive areas of the Country which stand to be impacted most by a potential for irreversible damage. We are including in our comments specific recommendations which are in line with the intent of the Clean Air Act, PSD regulations and the generally acceptable approach necessary to err on the side of protecting air quality through dispersion modeling which does not underestimate expected impacts. That approach has been the cornerstone of increment modeling in the PSD regulations since its inception.

1. **Proposed Clarifications Regarding the Effects of the Draft New Source Review Workshop Manual, Section IV(pages 31379-31380).** The proposal seeks to clarify that the draft, 1990 NSR Workshop Manual does not represent binding EPA regulation nor does it reflect or establish a final EPA policy or interpretation of EPA regulations. EPA notes in the "Background" section of the proposal that although entities such as the Environmental Appeals Board (EAB) have at times referenced the Manual as EPA's policy on certain PSD issues, the

Board has also recognized that the Manual is not binding regulation. Apparently, some of the latter determinations have been recently prompted by new thinking at the Office of Air and Radiation which interprets the NSR Manual, along with some parts of the EPA Modeling Guidelines (codified as Appendix W of 40 CFR, Part 51) as mere guidelines or recommendations on how to conduct an analysis such as increment consumption. With due respect to EPA's policy making, we find that guidance and recommendations of the NSR Manual with respect to increment modeling are far more technically sound and better justified by PSD regulations than what is found in EPA's proposed rule.

We do not see the need nor the rationale for EPA to highlight portions of the NSR Manual to make the obvious point that policy documents are not binding regulation; it has numerous Environmental Appeals Board references it quotes which make that point. EPA's purpose, instead, is to eliminate from the document limited aspects which we believe have previously provided sound guidance to the regulatory and regulated communities to achieve as much of a common approach to specific issues as possible, within the void of specifics in regulations, but which EPA says do not establish authoritative interpretation of EPA's regulations. To that end, however, the EAB has also spoken.

As EPA notes, while certain aspects of the NSR Manual have been replaced by regulations over the years, there are other aspects of guidance such as top-down BACT which continue to be utilized by EPA, although these are not contained in binding regulations. Through this proposal, EPA seeks to replace specific procedures in the NSR Manual on how to determine emission rates and conducting an increment analysis. Given that the approach in the Manual has in effect served as EPA's policy for almost two decades, it is of utmost importance that EPA fully consider and assure that any new or revised approach to increment modeling be both technically valid and consistent with regulatory requirements. Whether EPA chooses to update the Manual or puts specific procedures in regulation, EPA must consider and address all concerns expressed previously and further expanded upon in these comments to adequately justify its proposal to replace the guidance in the NSR Workshop Manual on short term increment modeling and related issues.

2. Proposed clarifications on the application of types of meteorological processors, required years of meteorological data use, and the use of “worst case” meteorological data year in subsequent modeling. Sections IV.C.1 to 3 (pages 31391-31393). In this proposal, EPA offers certain clarifications it believes are necessary on how meteorological processors and data years should be used in dispersion modeling. In the introductory part of section C, EPA seeks comments on whether additional guidance is needed on particular issues outlined in subsections 1 to 3, but in these subsections EPA only provided certain of the specifics on how it believes the issues should be resolved. In all of the these proposed clarifications, there is no clear indication by EPA of whether or how to implement these “clarifications”, nor how binding these should be in light of EPA’s desire to have a regulatory framework for clarifications which have references to regulatory methods.

It is important to recognize that although EPA notes that these issues have come to light through recent experiences with PSD increment modeling, none of the discussions nor suggested resolutions of the proposed clarifications pertain specifically nor solely to PSD modeling. It appears that the specific clarifications are meant to further EPA’s position in certain applications of these approaches in specific projects without full consideration of the repercussions these would have on its own regulatory guidance or on the complex nature of some of the topics discussed. To the extent that EPA seeks to provide additional non-binding guidance in instances where it would assist the review of determinations by reviewing agencies, such as the proper use of prognostic meteorological models, it can provide such guidance on the EPA SCRAM webpage, along the lines of the guidance available in the draft report it references in the proposal for attainment demonstration for Ozone and PM_{2.5} (which was finalized on April 4, 2007).

On the other hand, if EPA is seeking to modify or replace current regulatory guidance on permit modeling and associated meteorological data bases, such as on the issue of which meteorological data years are appropriate in permit modeling, then it is our position that EPA’s proposal is misplaced and contrary to the procedural requirements in place to address these types of modeling issues and changes. That is, EPA’s proposal refers almost exclusively to current

regulatory guidance found in Appendix W of 40 CFR 51; thus any proposed recommended changes or additions must be made through that rule making forum. Although the proposal offers certain “clarifications” and seeks comments on some of these, we believe it still circumvents the proper process if these are meant as regulatory changes to the methodologies in Appendix W since it does not follow the proper procedures identified in the Clean Air Act. We recognize that Appendix W partly originated to address Section 165(e)(3) of the PSD regulations, but these modeling guidelines were nonetheless mandated by Section 320 of the Act which calls for national conferences to standardize these methodologies for general applications, not just for PSD purposes. Section 320 makes specific reference for a need for a thorough public involvement process through these conferences and mentions specific entities (such as NOAA) which must have a say in any proposed modifications to the modeling guidelines.

EPA has held eight such national conferences and the next one is planned for 2008. As noted previously, there is nothing in this proposal which pertains specifically to PSD increment modeling and it is highly likely that those who have a stake or experience to bring to these issues are not being given the proper forum to address the issues through this specific proposal on PSD increment modeling. An example of such a group is the FLAG workgroup whose routine application of prognostic modeling for Class I area impacts could be affected by the proposal.

Notwithstanding our opposition to EPA’s attempt to circumvent the proper process to implement some of the guidance on permit modeling, we will briefly address each of the proposed clarifications. With respect to the issue of using expanded phenomenological criteria in choosing the appropriate types of prognostic meteorological model outputs (item IV.C.1), EPA itself recognizes that factors specific to “single source” permit modeling must be accounted for when trying to extract information from regional scale wind fields generated specifically for regional scale modeling. However, just how well their proposal, for example, to extract the effects of boundary conditions will perform should be more systematically analyzed and reviewed by the modeling community. One such forum to address these issues would be through the ongoing discussions at the annual EPA regional and state modelers workshops.

With respect to the two issues related to what years of meteorological data should be used in modeling, EPA references the requirements in Appendix W and proposes to allow states to use any data years it can justify for use in a specific application. First, we must clarify that EPA's proposal to allow more flexibility in the choice of data years seems to be limited, as it should be, to the use of wind fields derived from prognostic models. In this instance, the minimum 3 years of non-consecutive data requirement in the modeling guidelines is clear enough. However, it should be noted that the limit of 3 years of data use was set through the IWAQM/FLAG workgroups in recognition of the data intensive nature of these applications and the available computer resources at the time. As noted in the proposal, this recommendation in no way contradicted the requirement to have 5 years of consecutive, readily available hourly surface and upper air data for permit modeling. On the other hand, EPA's proposal to allow the use of any year of prognostic model outputs in defining the worst case impacts misrepresents the guidance in Section 8.3.1.2.c of Appendix W. That section merely recommends the future use of the year of meteorological data which caused the worst case impact from a source when an emission limit has been set specifically by the modeling results. The purpose is to assure that an argument cannot be made to relax the permit limit in the future based only on the meteorological data base. Obviously, as models improve or a better approach to meteorological data simulation is available, these can be used on a case by case basis, once such approaches are approved through Appendix W changes.

3. Treatment of sources with an FLM variance from Class I increments in subsequent increment consumption modeling. Under this proposal, EPA has relied on its interpretation of provisions of Section 165(d) of the Clean Air Act to conclude that it has discretion to allow the omission from any future Class I increment analysis, including cumulative assessments with other PSD sources, those sources which have been given a variance by the Federal Land Manager (FLM) when the FLM has certified no adverse impacts in light of modeled exceedences by the source of the Class I increments in a specific area. EPA justified this conclusion by pointing to an "ambiguity" between the provisions which allow an FLM certification of no adverse effects on Air Quality Related Values (AQRVs) and that under which a gubernatorial/presidential variance can be granted. This ambiguity, at least in EPA's view, leads

to two alternative solutions, one of which is not “workable” while the other seems too extreme of an interpretation. Thus, EPA proposes a “compromise” between these interpretations. The alternatives which EPA outlines are: 1) a variance needs to be “corrected” in a state’s SIP, possibly by offsetting the source’s impacts, if the Class I increments remain valid after the variance; or 2) the Class I increments should be replaced by Class II increments in areas where a variance is issued since the latter means that the Class I increments are no longer a valid indicator of adverse impacts on AQRVs. EPA’s compromise is to remove the source with a variance from future Class I increment analysis and only consider it in the assessments using increments at essentially the Class II level.

Viewed from the standpoint of the ludicrous nature of alternative (2), EPA’s proposal might seem like a compromise. However, the rationale EPA provides in its discussions, as well as its interpretation of certain provisions of Section 165(d) which lead to this position, are unfounded and misguided. In effect, EPA has found itself in a dilemma of its own making and the only solution it can then offer is to ignore the problem and dismiss the need to properly consider the consequences of a variance issued to a source impacting a Class I area. Before we point to where we believe EPA has erred in its proposal, it is important to recognize a few issues either not fully addressed or incorrectly surmised in EPA’s discussions.

First, as EPA notes, when Congress established the AQRV provisions of Section 165(d) of the Act, it fully intended that these Class I area levels be used as another layer, albeit a more critical level of protection, in addition to the Class I increment protection it established pursuant to Section 165(a) and Section 163 of the Act. As has been the position of the FLMs since these provisions were established, their affirmative responsibility to protect these pristine areas does not rest with a static determination of general AQRVs for class I areas, nor with reliance on ambient concentrations relative to Class I area increments to determine adverse impacts. At the time of the Clean Air Act revisions incorporating the Class I protection, and to a certain extent even now, many AQRVs were not well identified (with the exception of visibility) nor quantified to a level where generic determinations can be made by the FLMs. In addition, specific AQRV’s importance will vary among, and even within, each of the Class I areas. For example, the

National Park Service's (NPS) "*Permit Application Guidance*" document¹ notes that while visibility, aquatic and terrestrial resources are of concern in the Shenandoah National Park, other AQRVs in Theodore Roosevelt National Park are more sensitive to SO₂ concentrations. Similar delineations of Class I areas have been made by the Forest Service in Eastern US regions² where aquatic and terrestrial levels of concern for adverse impacts have been identified using "red line" and "green line" values. Thus, in most instances, determinations have to be made on a case by case basis, which is a dynamic and ongoing process which incorporates new information or assessments necessary to protect a particular Class I area.

Therefore, it is not the case that an allowable reading of the Act (as EPA claims on page 31382-3) is that once the Class I increments are rendered an ineffective predictor of the adverse impacts on a particular area's AQRV, these can be dismissed from future consideration as no longer representative of degree of harm on AQRVs and be replaced by the Class II increments. Such a reading would effectively dismiss the FLM's ability to reassess or define new AQRVs in an area and be able to (along with the Administrator or the Governor of a neighboring state with a Class I area) rely on the provisions of 165(d)(2)(C)(i) wherein a source has the responsibility to demonstrate impacts below class I increments even in the instance of no explicit demonstration of adverse effects on AQRVs. EPA's conclusion that ultimately it is the AQRVs and Class II increments which determine the disposition of a permit in Class I areas, is based on a fallacious argument that not only is there a presumption of adverse impacts if the Class I increments are exceeded, but also there is a presumption of the absence of harm to AQRVs if these increments are not exceeded.

The latter conclusion flies in the face of the Act and the intentions of Congress in establishing the two pronged approach to Class I protection. As noted in the NPS guidance

¹ "Permit Application Guidance for New Air Pollution Sources", John Bunyak, US Department of Interior, NPS, Report NPS/NRAQD/NRR-93/09, March, 1993.

² "Screening Procedure to Evaluate Effects of Air Pollution on Eastern Region Wilderness Cited as Class I Air Quality Areas", Mary Beth Adams, et.al. FS General Technical Report NE-151, September, 1991.

document noted above “*The Federal Land Manager holds a powerful tool. He is required to protect Federal lands from deterioration of an established value, even when Class I numbers are not exceeded...*” (Senate Report No. 95-127, 95th Congress, 1st session, 1977). If we were to follow this part of EPA’s logic, then sources which demonstrate impacts below Class I increments need not perform any AQRV analysis since the presumption would be lack of an adverse impact. It does not help in this situation to point to the fact that the FLM can then rebut this argument pursuant to 165(d)(2)(C)(ii) by demonstrating an adverse impact. For a long time, and in some instances now, source applicants relied on this flawed logic to resist any attempt by the FLM to demonstrate adverse impacts when Class I increments were met. We agree with EPA that AQRVs are the more important or stringent criteria in Class I assessments and that the Act uses these increments to establish who has the burden of proof in demonstrating the status of adverse effects in an area pursuant to Section 165(d)(2). However, the use of these increments as such a criterion does not lead to the conclusion that once no adverse impacts are demonstrated, the increments no longer serve a useful purpose. As noted previously, the provision in 165(d)(2)(C)(i) does not require the explicit demonstration of an adverse impact, but does require the demonstration of impacts below the PSD Class I increments for a permit to be issued.

The fact is that the commonplace occurrence is just the opposite of what EPA believes should happen. In many instances, the FLMs have demonstrated that adverse impacts occur in Class I areas regardless of ongoing demonstrations of no exceedences of the Class I area increments. This leads to the conclusion that the Class I increments are not protective enough in many instances, as was envisioned by Congress. To remedy this situation, in the early 1990s EPA and FLM policy established that applicants cannot rely on these increments, and even on the more stringent “significance levels” (proposed to be incorporated in regulation by EPA in 1996) for Class I areas to avoid the need to perform an AQRV assessment (see footnote 1 document, pages 10-12). We do not believe it was the intention of Congress to have the Class I increments be replaced wholesale by the Class II increments, even when a variance is issued in a given area by an FLM. The analogy to this would be the case in which a town sets a low speed limit and further augments it by a crossing guard at a school to protect children. If someone was

reckless and drove faster than the speed limit, but obeyed the guard's instructions to stop at a crosswalk and watch out for the children and, subsequently, no one got hurt, then according to the interpretation in alternative (2), the authorities could remove the speed limit since it was "ineffective" and left it only to the guard (whether on the job or not) to assure that no one gets hurt at the school crossing.

The place where EPA's arguments fail, forcing it to come up with the proposed exclusion of the variance source from further analysis of Class I increments, is in their comparison of the requirements of CAA subparagraphs 165(d)(2)(C) and (D). These provisions provide for an FLM or a gubernatorial/presidential variance, respectively, under certain requirements. In contrasting the content of provisions 165(d)(2)(C)(iv) for an FLM variance, which allow "alternative increments" to the Class I values of Section 163, to those of 165(d)(2)(D)(iii) for a gubernatorial variance, which allow for another set of "alternate increments" at least for SO₂, EPA finds an "ambiguity" in that only the latter variance provision still references the "*otherwise applicable maximum allowable increase*" which are the Class I increments in Section 163. This, EPA believes, leaves it questionable whether the Class I increments are still valid in the case of an FLM variance.

However, this ambiguity arises solely from EPA's mental exercise when it contrasts the two statutory provisions. These provisions must be viewed as a progression and not as dichotomous requirements; otherwise subparagraph (D) would not start with the specific case of certification denial per item (C)(iii). The correct and simpler way to view the requirements of the FLM Class I provisions in CAA §165(d) relating to a variance is as follows. In the case where the FLM demonstrates an adverse effect on AQRVs, even if the Class I increments are met, the permit is to be denied (CAA §165(d)(2)(C)(ii)). If the source demonstrates no adverse AQRV impacts and the FLM so certifies, even with the increments being exceeded, then the permitting authority may issue the permit with this "variance" pursuant to CAA §165(d)(2)(C)(iii). In this case, the facility must still meet higher allowable increases which are the Class II increment levels, except for a lower value for 3 hour SO₂. However, in the instance where the FLM has not certified that the source has met the "no adverse AQRV demonstration"

burden, the source owner can demonstrate to the governor it will have no adverse impacts, but only to the extent involving short term SO₂ increment exceedences (CAA §165(d)(2)(i)).

In other words, this latter provision for getting a gubernatorial (or, subsequently a presidential) waiver only comes into play in the limiting case where the FLM determination of adverse impact relates to short term SO₂ levels. Thus, if the FLM has based its decision on adverse impacts due to particulate emissions from the source causing an adverse effect, the source owner does not have recourse to the gubernatorial waiver. On the other hand, if the FLM subsequently agrees with the governor's determination of no adverse impacts from short term SO₂ levels on AQRVs, the governor can grant the permit pursuant to CAA §165(d)(2)(D)(i). In the case where the FLM does not agree with the governor's determination of no adverse impacts, the governor can recommend to the president to grant the variance (section 165(d)(2)(D)(ii)). Although not specifically repeated in this section, it is given that under this variance also the source cannot exceed the higher "Class II" increments of section 165(d)(2)(C)(iv), specifically as it pertains to other than the short term SO₂ impacts. Otherwise, these variances would allow the specific Class I area to be polluted more than the dirtier of our metropolitan areas. And just because Congress decided to require that in the case of the gubernatorial/presidential variance a source to meet certain lower SO₂ maximum increments in low and high terrain situations than the "Class II" values of the FLM variance provisions in CAA §165(d)(2)(C)(iv) on the specific days of exceedences of the Class I increments and, furthermore, to require under section 165(d)(2)(D)(iii) that these source exceedences of the Class I increments of Section 163 be limited to 18 days in a year, does not establish the lower SO₂ short term values as some "alternate increments" which do not have a counterpart in section 165(d)(2)(C) for the FLM variance.

Instead, the proper reading of the CAA is that for the specific protection of the Class I areas where a gubernatorial/presidential waiver is granted for SO₂ impacts in light of FLM's initial opposition, the expectation is that the source must meet more stringent requirements for the short term averages for that pollutant than the "class II" increments under the FLM variance

provision. The values in Section 165(d)(2)(D)(iii) reflects Congress' concern with allowing any ongoing SO₂ exposures in Class I areas by limited not only the short term exceedences of the Class I increments to certain limited days in a year, but also at levels below the "Class II" increments in the Section 165(2)(d)(C)(iv).

Congress chose to address short term SO₂ impacts on terrain features in Class I areas by establishing lower level than the "Class II" increments when a gubernatorial variance is to be granted, but these levels should not be viewed as more in line with AQRV adverse effects which Congress had in mind more than the Class I increments it established. Simple calculations show that the higher increments in the case of FLM certification of no adverse AQRV impacts at CAA §165(d)(2)(C)(iv) are all set at 25% of the corresponding NAAQS (that explains the lower 325ug/m³ value for 3 hour SO₂ instead of the 512 ug/m³ Class II increment). On the other hand, Congress chose to set the "low" terrain SO₂ values at 10% of the NAAQS and the "high" terrain values at about the midpoint of these two percentages (i.e. at 17% of the NAAQS). In doing so, Congress did not establish "alternate" increments, but levels it thought would provide further protection to the Class I areas from short term SO₂ impacts than allowed under the FLM variance provision. Thus, there is no magic to these latter values and no basis to argue that somehow these alternative levels allow EPA to ignore the Class I increments of Section 163 in the case where no adverse AQRV demonstrations have been made.

The above discussions point to one of the problems with the EPA's proposal to omit the variance source from future analysis of the Class I increments in the particular area. In the instance where the FLM is satisfied that no adverse impacts would occur and a variance is warranted, even though the SO₂ increments were exceeded while the PM₁₀ and NO₂ increments were not, the EPA approach would eliminate that source from any future assessments of all PSD Class I increments, even though the variance concerned specifically the SO₂ exceedence. Thus, the source and all future PSD sources addressed in a cumulative analysis with the variance source would get the bonus of not ever having to comply with pollutant increment which were not the basis of the variance. They would also forgo their responsibilities to demonstrate no adverse AQRV effects when increment exceedences could have occurred. This, of course,

would lead to a level of pollution impact not contemplated by Congress nor allowed by the Act.

We now turn to the alternative which EPA rejects in the proposal, but which apparently it had determined to be workable in the past. That alternative starts with the determination that the specific variance granted by the FLM would be considered a variance from section 165(a)(3) requirements for the individual source, but the reviewing agency would still have to comply with the requirement to correct the exceedence of the Class I increment through the SIP. EPA's argument then goes on to state that this alternative could force the source to obtain "offsetting" impacts and, as soon as the entire increment is consumed, the State would be forced to revoke the permit as soon as it grants it. EPA finds some support for its arguments in quoting the *Alabama Power vs Costle* case.

We agree that a variance granted to a particular source effects that source's disposition as far as the Class I increment provisions, but we disagree with the follow-up interpretation of what would or should happen when a variance is granted. A variance granted under the PSD Class FLM provisions is essentially the same as any other "variance" or potential SIP "violation". In the case where the state SIP does not incorporate approved procedures to accommodate a variance, a single source SIP revision can be submitted to EPA for approval. This happens, for instance, when a variance from NOx RACT provisions is requested. In instances where there is another violation, such as the PSD increment, a source specific SIP "action" could be allowed through the proper treatment of the permitting in such an instance either by incorporating the "variance" provisions of the Act into the state's SIP or by pursuing a source specific SIP variance.

Thus, as long as the SIP requirements properly comply with the PSD provisions of the Act, including the variance provisions and the associated higher "maximum allowable increases" which apply for the specific circumstance, there is no need to find the SIP deficient. That is, the requirements of Section 165(a)(3) and the more general requirement in 40 CFR 51.166(a)(3) that increment violations be corrected, would be met in that the applicable increments for the specific variance source would be in effect. The language in the *Alabama Power vs Costle* case states

that the “waiver” granted to the facilities has vitality and the facilities are in compliance with the Act. The Court also recognized a concern on how the facilities, in total, would cope with the exceedences of the PSD increment, but this would not force the state to revise its SIP to meet the Section 163 PSD class I increments.

Having provided what we believe is the proper way to interpret the waiver provisions in Section 165(d), along with the provisions in Sections 163 and 165(a) of the Act, we suggest a revised approach to EPA’s proposal which we believe offers the protection granted by the Act to Class I areas through the PSD increments and the AQRVs. We start by noting that the concern with PSD increment exceedences must be viewed in the context of both space and time. This context is lost in the simple example EPA provides on page 31384 of the proposal on how to address 4 sources with and without FLM variances. In many instances, PSD sources which impact Class I areas are at far distances from these areas and, as such, projected impacts of any significance or of exceedences occur in only a small portion of the Class I area. In many cases, that area could be just a fraction of the total Class I area. Thus, any “waiver” from future consideration of that source from the Section 163 PSD increments can rightly be allowed only on those specific areas. This is especially true since AQRV variations within a Class I area could be such that variances can be granted if the no-adverse determination is made for a specific impacted area. Furthermore, the “waiver” from future modeling would be pollutant specific. That is, if the PSD increments for SO₂ are exceeded at certain receptors where the FLM can certify no adverse AQRV impact and a waiver is granted, then any future increment analysis for that area only, and only for SO₂, can be limited to the alternative maximum increments in Sections 165(d)(2)(C) or (D). In all other areas, the source with a specific waiver for SO₂, along with all other increment consuming sources, must still meet the SO₂ PSD increments in Section 163 of the Act. For other pollutants, the increments of Section 163 would still apply in all of the Class I area for all sources. To be more precise, this “omission of the waiver source” provision must only be applied to the averaging time of the increment which was exceeded in keeping with Congress’ specific concern with short term SO₂ levels.

Furthermore, given that Section 165(d)(2)(D) recognizes the importance of minimizing

the number of occurrences of the exceedences of the Section 163 and subparagraph (D)(iii) increments in terms of number of days on which these are allowed, the Act clearly point to the need that future projected short term increment analysis must limit the exceedences from the source with a waiver, to only those number of days on which it had originally projected exceedences. Then, in any cumulative analysis, the requirement to determine the cause or contribute to an increment violation can be performed through the commonplace approach used currently in modeling analyses which considers time and space concurrent impacts. Such a methodology would conform to the requirements of the Act and would not necessitate a revision to the SIP, as long as the latter has the appropriate provisions. Although such an approach would require some sort of tracking of past actions, it is very workable given the limited instances and areas where waivers from the Class I increments analysis have been or should be allowed.

It is also important to note that we presume that EPA would still require the assessment of the variance source in all future AQRV assessments by subsequent PSD sources which impact the Class I area. That is, the emissions of the variance source shall continue to be included in the quantification of total emissions and their impacts on visibility and all other AQRVs in order to properly determine the potential for adverse effects as well as any necessary mitigation measures if such were to be found.

4. Emission estimation methods for increment modeling. In this proposal, EPA is seeking to replace long standing acceptable approaches to the estimation of emissions specific for modeling of PSD increments which it believes are too rigid and do not allow states the flexibility to decide on the proper approach using guidance criteria, such as reliability of data and consistency. As part of its proposal, EPA seeks comments on recommendations submitted by WESTAR, which include a set of guiding principals to be used along with a menu of approaches which reviewing authorities can choose from, given the availability of backup information the states deem appropriate. Before we get to the specific issues we have with the EPA proposal and certain items of the WESTAR recommendations, it is instructive to look at some of the underlying assumptions and regulatory references EPA uses to support its viewpoint.

First we note that EPA proposes in Section V.B. to promulgate a new definition of actual emissions specific to PSD increment calculations (to be included in a new section 40 CFR 51.166(f) which would be easier to find), and articulates a policy in Section V.B.1 (page 31386) which would give the reviewing authority discretion to select the appropriate data, based on availability of records and be “rationally based”. EPA suggests that the policy is contained in the proposed language to be codified at 40 CFR 51.166(f)(1)(iv). However, the specific language in this subsection as well as in all of 40 CFR 51.166(f) provides a clear indication that the proposal boils down to allowing the use of annual average emissions for even short term impacts. As such, this proposal should be rejected outright even by WESTAR, which had qualified the conditions under which certain emission choices might not be appropriate. In addition, in making their argument for allowing more discretion to the reviewing authority to use most appropriate data available, EPA references an introductory section (8.0.a) and other language from Appendix W of 40 CFR, Part 51 (page 31386). This selective reference on the part of EPA does not qualify that specific recommendations on calculating emissions are contained in Section 8.1.2 of Appendix W and are very prescriptive. This is because EPA had already dismissed this section on the previous page of the proposal as applicable only to NAAQS analysis.

EPA bases many of its arguments on the distinction between the PSD and NAAQS programs wherein the former has to account for actual emissions changes in performing an increment analysis, while for NAAQS compliance, the requirement is to use allowable emissions. We agree with this distinction. In fact, EPA’s draft 1990 NSR Workshop Manual recommends a specific approach to the calculation of actual emissions for PSD increments; it states that for short term averaging times, the maximum actual emission of the sources should be used, as distinct from the use of annual average emissions for annual impacts. This guidance has been used in multitude of applications, even before the draft 1990 document was introduced, but now EPA is asserting that the approach is too rigid and might not give enough weight to certain qualifiers such as the availability of data, especially at the time of the baseline dates, and to consistency between the baseline and current inventories.

One of EPA's arguments repeats that of WESTAR's in referencing a specific definition of actual emissions at 40 CFR 51.166(b)(21). EPA notes that the same definition is also referenced in the "baseline concentration" definition at 40 CFR 51.166(b)(13)(i), but that is true only to the extent of the use of the term "actual emissions", not with respect to the additional qualifier which EPA uses to advance its argument. That qualifier starts with one of the definitions of actual emissions at 40 CFR 51.166(b)(21)(ii) which states that, in general, actual emissions shall equal the average emission in tons/year over a given 2 year period. This particular definition has been the cornerstone of PSD applicability determinations since the Clean Air Act revisions incorporating the PSD provisions in 1977. EPA correctly notes on page 31389 that the latter definition does not directly address how to calculate actual emission for increment modeling purposes, but we note that the proposal does not recognize other sections of the regulations which set forth indications on how increment modeling should be performed.

In particular, EPA does not recognize the presumption which the reviewing agency may make under 40 CFR 51.166(b)(21)(iii): "*The reviewing authority may presume that source specific allowable emissions for the unit are equivalent to the actual emissions of the unit*". The use of the definition of annual average emissions for PSD applicability and netting determinations is commonplace. However, the regulations do not establish that specific definition of actual emissions as appropriate for all other aspects of the PSD program. Furthermore, and more germane to modeling, EPA ignores that the use of allowable emissions is specifically referenced in the section dealing with source impact analysis, at 40 CFR 51.166(k), where the proposed source and all other applicable emission increases and decreases are to be assessed. Lastly, WESTAR's recommendations reference guidance in the preamble of the 1980 PSD rules (45 FR at 52718, col. 3) for determining baseline emission rates, where it notes "*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.*" 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.”. It should, however, come as no surprise that sources in fact operate at levels below their permitted (or allowable) emission limits in order not to violate their permit conditions. This is especially true when short term permit levels are concerned. All in all, these additional references clarify the requirement and the importance of erring on the side of predicting conservative impacts when actual data is limited or a source is unable to establish proper actual emissions for either baseline or current conditions.

We note these differences between the definitions of actual emissions not only because of their effect in identifying the proper approach to increment modeling, but also because EPA uses the definition specific to annual emissions in 40 CFR 51.166(b)(21)(ii) to argue that the needed data to calculate these emission is at times lacking. That is, data on production rates, operating hours, and types of materials are scarce, especially when the desire is to model conditions at the time of the baseline dates which can be in the distant past. We acknowledge the difficulties agencies face when attempting to make emission estimates not only in the past, but also for minor source changes since the baseline date, as articulated by the WESTAR report. However, certain of the data needs which are important to determine annual averages, such as hours of operations or details on production rates, are not the controlling parameters for determining maximum actual short term emissions for modeling purposes. Furthermore, EPA’s main emphasis seems to be in trying to quantify the emissions at the time of the baseline dates and then to worry about how best to carry out the same approach to increment consumption calculations at the “current time”. This emphasis is misplaced and biases the conclusions which follow as to the appropriate data bases to be used.

In most instances, states have determined the baseline concentrations as of the baseline dates by means other than using baseline inventories and have modeled changes since these dates in terms subsequent increases and decreases in emissions at sources which consume increment. That is, in establishing the baseline concentrations, many states have relied on the language of the Clean Air Act at Section 169(4) which prefers the use of *“air quality data available in the EPA or a State air pollution control agency and on such monitoring data as a permit applicant*

is required to submit". Once this baseline concentration is established, all subsequent increment analysis is based on the modeling exercises and any use of subsequent monitoring data to somehow establish the change in air quality since the baseline dates (as was one of the WESTAR recommendations) is unworkable due to the multifaceted difficulties which would be encountered, but which need not be discussed in terms of the current proposal. We understand that at times monitoring data might not be available at the time of the baseline dates and there might be a need to establish the change in concentrations since baseline using a modeling approach exclusively. However, whatever concessions one has to make in such case by case and specific determination should not establish precedent for all of the rest of the increment analyses procedures.

What is further troubling in EPA's proposal is the notion that the emissions calculations methodology chosen by the reviewing authority can use the data availability and consistency concept to potentially force the use of unreliable or undesirable emission estimates. That is, by insisting that "fairness" dictate the establishment of the current emission inventory on the same basis as the baseline inventory in order to perform an "apples to apples" comparison, EPA and WESTAR would have the reviewing agencies allow the use of the "lowest common denominator" form of data to dictate how the increment consumption should be performed. It is then but a simple step to allow the use of weakly supported annual average data from the past, in addition to annual averages in the current inventory (from a choice of any two years of data sources might choose per EPA's complementary proposal) to "determine" whether air quality has degraded in an area for all averaging times, when it is clear that annual average emission rates would result in underestimation of short term PSD increment consumption.

However, EPA's proposal to allow the agencies to strive for mediocrity does not end there. On page 31385-6 of the proposal, EPA puts forth the proposition that Congress never intended the PSD increment calculations to be as precise as those for NAAQS compliance demonstrations. In EPA's view these increment analysis are artificial assessments in that actual emissions as of the baseline date change and certain emissions can be used to adjust the baseline concentrations, and it is only the relative magnitude of the concentrations due to these changes

versus the baseline concentration that is important. It is clear to all involved that the increment analysis should account for all applicable emission increases and decreases which would affect a corresponding dynamic change in the status of the increment consumption for a given area after the baseline date. Once the baseline concentrations are set and it has been demonstrated that either the total PSD increments Congress quantified in Section 163 of the Act or more constraining values relative to the NAAQS are available, the modeling then predicts impacts relative to these latter values rather than relative to the baseline concentrations for each permit action under Section 165(a)(3). This is similar to an NAAQS analysis which allows for variation of concentrations in an area over time in terms of changing background levels, which are to be incorporated in the assessment of total impacts relative to the NAAQS, and which also can go up or down.

Thus, the increment consumption analysis needs to be as, if not more, precise since it is wholly a modeling exercise after the baseline concentrations are established. What is lacking in EPA's discussions is the fact that in addition to performing a PSD increment analysis, modifications at major sources and minor sources will also need to demonstrate NAAQS compliance using emissions data developed by the sources and verified by the review agency. Data availability and the proper methods used to develop the source inventory is also an issue and requirement in that instance as it is for the PSD increment analysis. Thus, to achieve the proper result in both cases, EPA should assure that permit applicant and sources are taking the proper steps necessary to provide adequate and accurate information. In instances, such as for minor and mobile source impact management as discussed by WESTAR, where accurate information is hard to come by especially in terms of changing emissions and is, at times, left to the agencies to develop, a case by case determination of how to address the data gaps and the level of modeling can be made by the review agency. However, that discretion does not need to be substituted wholesale for the rest of the permitting activities, especially for those which fall under the requirements of Section 165(a)(3).

Having addressed some of the background information and assertions which EPA relies upon in this proposal, we now turn to comments EPA seeks on the WESTAR recommended

approach for the determination of actual emissions for modeling of short term increments and the associated guiding principals which would govern the choice of the approach from a menu (in sections V.B.3 and V.B.1, respectively). We first note that the majority of WESTAR's fourteen recommendations contain a number of suggestion which are supportable in many respects. However, a few of these have been identified in the past to be based on technically unsound and unsupported concepts. In particular, the issue of how emissions for short term impact calculations should be estimated had been found previously to be objectionable. EPA's proposal acknowledges receipt of NESCAUM's October 18, 2005 comments, at footnote 7 of page 31378, which in particular expressed concern with Recommendation 4 dealing with the issue of emissions for short term average increments. Details on the technical and regulatory limitations of the WESTAR method are provided in the attachment to those comments.

In addition to NESCAUM concerns, NACAA (formerly STAPPA and ALAPCO) also provided comments at WESTAR's request on these recommendations through its PSD Reform Subcommittee. The NACAA Subcommittee noted its support for many of the WESTAR recommendations, but could not support the package as a whole precisely because of the issues which NESCAUM identified as problematic. NACAA's comment letter of May 10, 2005, which was copied to EPA staff, is included here as attachment I. Furthermore, a April 7, 2005 memorandum transmitting the set of final Recommendations from the WESTAR PSD Workgroup to the Council states "*The Workgroup also believes it is important to note that while the attached document contains consensus recommendations from participating WESTAR States and FLM representatives, there was one area (Recommendation 4) where EPA Regions 8 and 10 staff participating in a consultive role to the process indicated that they do not support the approach recommended by WESTAR.*" It is important to note that EPA staff who are referenced in these discussions are the regional meteorologists with specific expertise in modeling.

These concerns apparently did not dissuade EPA from merely parroting WESTAR's recommendations in their proposal and seeking further comments. In case EPA did not fully understand the precise concerns, we will attempt to provide more details on these comments and

will expand on some of the concerns. WESTAR's six guiding principles, to be used in choosing the appropriate emissions from a set of menu methods, are listed on page 31386 of the proposal. The rationale behind these principals are detailed under Recommendation 4 of the WESTAR May, 2005 report. The latter indicates WESTAR's belief that the principle of maximizing the accuracy of the methods (the first principle) should have primacy in the selection of the appropriate method. We agree that method accuracy is important, but suggest that the WESTAR principle to conform to the Clean Air Act and PSD regulations should carry as much weight. The arguments set forth in the WESTAR report and in EPA's proposal in support for the other principles concern: a) consistency between the baseline and current inventory emissions, b) practicality and availability of data to calculated emissions and c) equitable and fair treatment of all sources within and across jurisdictions.

We have addressed some of these issues to a certain extent in the previous discussions. As we noted before, we do not believe permitting agencies should be encouraged to use calculation methods or data forced by inadequate data and record availability at certain sources out of the emissions inventory (i.e. the lowest common denominator sources) in order to fit the aforementioned principles, especially in the case, as it is here, where the menu of approaches contain technically and regulatory un-defensible options. As the WESTAR report notes, some of its Workgroup members also felt the menu of options approach might limit their ability to choose the most appropriate option. EPA's argument that the determination of maximum actual short term emissions typically require the use of Continuous Emission Monitoring (CEM) data (which it notes is not usually available) is not in line with WESTAR's report nor with acceptable emission estimation techniques. WESTAR's report merely note that for major and minor sources (including area sources) CEM data or short term emissions information may be unavailable and agencies must rely on other techniques to calculate emissions. Such methods are available at EPA's CHIEF webpage which includes ongoing efforts to improve emission techniques from non-major sources as well (Emission Inventory Improvement Program). To the extent the concern is with minor sources, we previously indicated that we agree with WESTAR that states should have discretion on how to address the issue on a case by case basis. However, with respect to EPA's and WESTAR's arguments that a rigid requirement of certain emission

methods can counteract the States and EPA's air quality management efforts, we deemed these unfounded. Specifically, in terms of claiming that these "rigid" requirements would discourage sources from adopting CEMs, keeping emission records and encourage sources to seek more permitted increment consumption, the arguments are a red herring. It is not the PSD increment analysis methods or the assumed emissions which dictates whether the requirements of CEMs, emission records or what a specific permit applicant seeks as permit limits, but rather the case specific project business and operational needs for the type of source, mitigated by specific regulatory requirements for the particular source and measures such as BACT determinations and NAAQS and PSD increment calculations.

The WESTAR report proposes a set of menu of options for emission calculations based on comments from several Workgroup members 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. However, a review of available guidance and policy statements from EPA, before and since the publication of the 1990 draft *NSR Workshop Manual*, indicates conformance to the general recommendation found in Section IV.D.4 of the Manual. That is, for short term impacts, the highest occurrence or the highest percentile actual short-term emission rates are to be used. EPA's proposal notes that some states and EPA regions have allowed the use of the annual average emissions for these calculations. To see if these are outliers, and to more objectively determine how these emissions have been calculated in individual States, one only needs to check the results of EPA's *PSD Questionnaire Summary* presented at the Modeler's Workshop in May, 2005. These results are summarized at the EPA SCRAM webpage³ and provide both a national summary and EPA regional breakdown statistics. A copy of the national summary is contained in Attachment II.

It is clear from the responses from EPA regional and state modelers that staff implementing the review and concurrence of the proper methodologies for calculating PSD increments indicate that, in the vast majority of cases, short term emission are quantified by the

³ http://cleanairinfo.com/modelingworkshop/presentations/rls_dispersion.htm

use of either the allowable, maximum actual, or average actual short term emissions. The use of annual average rate has occurred in less than 10% of cases (see question #16 and 18). In addition, in the majority of cases, the annual emissions are used only for annual impacts (question #17). Furthermore, the methodology used to model changes in emissions from a source previously in the baseline or sources coming in after the baseline have almost always relied on the allowable or actual emissions other than the annual rate (see questions 9b and 9c). A review of the regional breakdown of the results shows that the states in WESTAR (EPA regions 8 to 10) have conformed to these methods.

The explanation of this discrepancy between current practice on the one hand and EPA's proposed methods on the other is not, as some will likely presume, that staff have just followed what was in the NSR Manual guidance. This is especially true if one also tries to claim that a range of interpretations can be had under the current regulatory schemes. Rather, the explanation lies in the fact that EPA and State modelers who are knowledgeable in the complexities of dispersion modeling have recognized and pointed out the pitfalls in performing increment analysis which the WESTAR menu approach and EPA's proposal have not fully recognized. It seems clear that, contrary to the warnings of its own expert staff, EPA has determined that it knows best how to address dispersion modeling of increments

Before we present some of the technical issues of concern, we would like to first address the two approaches contained in the WESTAR recommendations on how to determine emissions for short term increment modeling. These are listed on page 31390 of the proposal. Two separate menu approaches are presented, depending on whether CEM data is available and both approaches contain a set of choices which can be used without a preferred hierarchy. An approach without a hierarchy could work only to the extent that each of the methods is equally acceptable and technically sound. Unfortunately, that is not the case with many of the methods in the EPA proposal. Some of these will clearly lead to underestimation of short term PSD increments. Of the two alternative "bins" of choices, some listed under the "available CEM data" set can be supported, but essentially none of the ones under the no-CEM data list are technically sound or acceptable. EPA's proposal and WESTAR report note that CEM data are

rarely available and, based on a check of information at some of the NESCAUM states, we find that CEM data availability is less than 10% for minor sources and only about 25% for the Title V facilities. In addition, there are no CEM data for PM10, nor will there be any for PM2.5 emissions when PSD increments are developed for that pollutant. Therefore, by default, WESTAR's approach and EPA's proposal means that essentially in all circumstances, the sources and the reviewing authorities are left with four choices under the menu with no-CEM available data. This is because of EPA's proposal will also invoke a "fairness and consistency" doctrine in developing the inventories.

The first three choices under this latter menu are all related one way or another to the calculation of actual annual emissions. This is clearly not acceptable for use for short term (3 and 24 hour) PSD increment analyses. From the analogy we gave under the FLM variance discussions, this would equate to the authorities pulling over the driver who was speeding, but not being able to determine if he should be ticketed until they determine his average speed over the year. The last choice under this menu, that of using the allowable emissions rate, is the only acceptable method, even if that is deemed a "screening" analysis. For the set of choices under the CEM availability data menu, we would point out that only the approaches using the maximum or upper percentile short term emissions for each source (not the entire facility) are technically acceptable. The use of hourly CEM data (last entry) might be acceptable under certain conditions, as noted below.

The last issue to address in EPA's proposal is the discussion on page 31390 that stakeholders have suggested, and EPA agrees, that it is unreasonable to assume that a multitude of sources included in an emission inventory will all operate simultaneously at their maximum emission rates throughout the year and that such an assumption leads to overly conservative impact calculations, and therefore, a more representative emission rate should be used. Although everyone agrees with the assumption that continuous operations at maximum rates at all sources is very unlikely, we point out that the aim of the modeling exercise and the way it is implemented is different than this assumption. The assertion and its relation to modeling, as reached by EPA, reveals a misunderstanding of what the modeling exercise is really trying to

achieve. A detailed discussion of the latter is presented in a paper by Leon Sedefian of New York State Department of Environmental Conservation, contained in attachment III.

We will not repeat the details, except to point out that the reason for assuming the hourly emission rate is best represented in the modeling by the allowable or maximum short term emissions is related to the fact that it is not possible to determine *a priori* which combination of a large set of meteorological conditions, and the multitude and distinct set of these combinations which could be associated with maximum impacts in specific cumulative analysis, will result in the determination of maxima from either a single or multiple set of sources. As each discrete meteorological data hour is analyzed by the model, it looks to see if interactions of plumes from different sources could occur within the limited wind flow for that particular hour (and not for all of the sources in the inventory) and then calculates whether the set of other meteorological parameters lead to the overall maxima (or highest-second-highest value) from this set. This process is repeated for every hour of a 5 year period to assure all potential combinations of meteorological cases have been considered and then the corresponding averages are calculated for each of the averaging times of the increment. At the end, the specific impact maxima for 3 and 24 hour cases are related to specific meteorological conditions, receptor locations and a set of combined sources which could not be known in advance. Nor can these combinations be simulated any other way than to assume the possibilities of emissions associated with the highest impacts. As noted in the Sedefian paper “*Thus, modelers are not fixated on the need to assume simultaneous hourly operations of all sources at their maximum emission rates under the delusion that such operations are commonplace*”.

The above discussion lead us to reject the menu approach and many of its entries proposed by WESTAR and instead suggest an alternative scheme which is based on a hierarchy of choices which are defensible both on technical grounds and on based on regulatory guidance. For determining emissions to be used for short term increment calculations, we propose the following hierarchy:

- 1) Use allowable emissions if data to properly quantify actual maximum emissions are

not available or cannot be substantiated by the permitting agency. Using the allowable emission rate as the first entry conforms to the presumptions found in the PSD regulations at 40 CFR 51.166(b)(21)(iii) and 51.166(k), but can be bypassed if valid short term actual data is available.

2) Use maximum actual emissions calculated per guidance in Section IV.D.4 of EPA's draft *NSR Workshop manual*. If CEM data is used for this purpose, then the maximum or upper percentile values have to be determined per individual sources and not as an average for the facility.

3) Use hourly CEM data only to the extent that the concerns raised in Attachment III on the representativeness of the CEM variability over time of day and year can be overcome.

A final comment is necessary on EPA's proposal to allow the use of projected actual emissions from a modified source (page 31391) in line with their 2002 NSR reforms. EPA claims that for the same reasons as in the reform rule, actual emissions can be used for increment modeling for source modifications. However, EPA's final notice of that PSD rule (FR, Vol. 67, No.251, December 31, 2002, page 80196) is clearly contrary to this as it states "*For example, when you must determine your source's compliance with the PSD increments following a major modification, you must still use the allowable emissions for each emissions unit that is modified or effected by the modification.*" Furthermore, EPA's proposal is contrary to the PSD regulation at 40 CFR 51.166(k) which requires the use of allowable emissions for new and modified sources in performing a modeling analysis.

These conclude our comments on EPA's proposal. We hope the explanations provided and the concerns raised will lead to substantial modifications to the proposal. Otherwise, the specific schemes EPA has proposed to refine the PSD regulations and policies will lead to underestimation of PSD increment consumption and a corresponding inability on the part of the regulatory agencies to assure that air quality degradation will not occur. This concern is further accentuated by specifics of the proposal for Class I areas.