APPENDIX I

STAKEHOLDER COMMENTS RECEIVED REGARDING THE DRAFT VERSION OF THE *EMISSIONS FACTORS PROGRAM IMPROVEMENT EFFORTS* REPORT

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STAKEHOLDER COMMENTS RECEIVED REGARDING THE DRAFT VERSION OF THE *EMISSIONS FACTORS PROGRAM IMPROVEMENT EFFORTS* REPORT

On July 20, 2005, EFPAG published a draft version of the *Emissions Factors Program Improvement Efforts* report and requested that stakeholders comment on the content of the report. By the time the comment period closed on August 31, 2005, EFPAG had received comments from six organizations. The organizations that provided comments are identified in Table 1, while the comments themselves are attached.

Table 1. Organizations that Provided EFPAG with Comments on the Draft Version of the *Emissions Factors Program Improvement Efforts* Report

Organization	Commenter
Alliance of Automobile Manufacturers	Valerie Ughetta, Director of Stationary Sources
E. I. DuPont de Nemours, Inc. (DuPont)	John Dege, Leader - Air Competency
EPA, Office of Research and Development, National Risk Management Research Laboratory, Air Pollution Technology Branch	Andy Miller
National Environmental Development Association's Clean Air Project (NEDA/CAP)	Leslie Ritts, Counsel to NEDA/CAP
National Lime Association (NLA)	Eric Males, Director of Regulatory Affairs
National Stone, Sand & Gravel Association (NSSGA)	John Hayden, Vice President - Environmental Services

The majority of the comments received concerned recommendations regarding the Emissions Factors Improvement Program rather than the report itself. As a result, many of the comments have not been directly incorporated into the report. However, EFPAG wants to capture the stakeholder's input and will consider it during future work on the program.

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ATTACHMENT 1
COMMENTS RECEIVED FROM THE ALLIANCE OF AUTOMOBILE MANUFACTURERS

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Alliance OF AUTOMOBILE MANUFACTURERS

August 31, 2005

Electronic submission to Myers.Ron@epa.gov

Ron Myers
U.S. Environmental Protection Agency
Emissions Factors & Policy Applications Group
Research Triangle Park, NC 27711

Re: **Alliance of Automobile Manufacturers: Comments on USEPA Report "Emissions Factors Program Improvement Efforts" (June 2005)**

Dear Mr. Myers:

The United States Environmental Protection Agency (USEPA) Emissions Factors and Policy Applications Group (EFPAG) is soliciting stakeholder comments by August 31, 2005 on "Emissions Factors Program Improvement Efforts," a report summarizing the information gathering and Agency actions to date for updating and improving the current emissions factors program. The Alliance of Automobile Manufacturers (Alliance) welcomes the opportunity to review and comment on the report. Our members support the Agency's initiative to improve the current program, and have been involved with EFPAG's efforts, by responding to stakeholder surveys, participating in interviews, and attending workshops to identify existing uses of emissions factors and specific areas of the existing program that could be improved.

The Alliance is a trade association of nine car and light duty truck manufacturers consisting of BMW Group, DaimlerChrysler, Ford Motor Company, General Motors, Mazda, Mitsubishi Motors, Porsche, Toyota, and Volkswagen. Our members currently use air emissions factors for a variety of reasons, ranging from the development of facility emissions inventories to applicability determinations and compliance demonstrations pursuant to permit and regulatory requirements, among many other uses. These are areas of great importance and any improvements to emissions factors in the future may have a potentially significant impact on our members. Therefore, we are very interested in the future direction of the emissions factors improvement program, and have provided the following comments and recommendations to assist EFPAG in their endeavors.

Overall, the discussions of the stakeholder responses to interviews and surveys provided in the report, as well as the comments received from stakeholders on the program improvement options discussed during the workshops, appear to provide an accurate summary to the extent of our familiarity and involvement during this process. While the Alliance appreciates that EFPAG has actively involved industry and industry trade organizations throughout the process of preparing the report, we remain concerned with the direction of the emissions factors improvement

program from this point forward. We have several specific concerns with the document in that regard:

A. Certain Priority Issues Raised by Stakeholders Have Not Been Addressed

EFPAG received a number of specific stakeholder recommendations but then "summarized" the comments into six (6) "consensus" recommendations. The report also indicates that EFPAG has initiated four (4) projects to "address" these consensus recommendations. However, the six recommendations do not address all the recommendations and concerns that were raised, some of which are significant. We also think that the four projects briefly described in the report are not given enough substantive discussion, especially about the process by which they were selected and developed, how they are particularly responsive to the priorities and recommendations from *stakeholders*, and more importantly whether there will be enough policy, legal, and procedural work done in parallel by EPA to anticipate how to appropriately implement the projects and then apply the outcomes of these projects. These aspects also merit considerable and early stakeholder input.

In addition, stakeholders have indicated that developing and improving the emission factors for PM 2.5 are an immediate priority. The implementation of the new PM 2.5 NAAQS will require the use of emissions factors in various aspects to support the requirements for both the regulated community and regulators in relation to the standard. To date, sufficient information regarding PM 2.5 emission factors has not been available leading the EPA to implement PM 2.5 NSR on the basis of PM 10 emissions. Further, the accuracy and variability of the available PM 2.5 stack test methods should be considered a priority in the Emission Factor Program Improvement Efforts. The final EPA report should address what is being done to address top priority needs, the status and timing for new PM 2.5 emission factors, and how Agency resources are being apportioned to address these immediate needs versus the other "projects" undertaken by EFPAG. We are concerned that the projects being initiated are addressing needs that are significantly less of a priority than the PM 2.5 issues described above.

While we recognize that EFPAG's focus is on the programmatic improvements to the existing emission factor system, the immediate need to develop PM 2.5 emission factor information should take precedence with respect to the Agency's resources. Accordingly, we recommend that EFPAG consider placing several of the initiated projects on hold until the immediate priority of developing appropriate PM 2.5 emission factors and test methods is completed.

B. There is Too Little Information on the EFPAG Projects

The report provides only minimal information on each of these projects and their development. As a result, the reader does not know which of the preliminary options are being considered during implementation of these projects. Given the amount of effort EFPAG expended to develop the option papers and conduct surveys, interviews and workshops, more detail should be provided in a revised report (or issued as another document) to explain the history, scope, schedule, and direction of the new projects. A discussion summarizing which preliminary options are being considered and implemented would provide the necessary transparency to ascertain the future direction of the emissions factors program improvements and will also help

bring together the program's past efforts with future efforts. In mapping out each project, the Alliance recommends that EFPAG provide additional information regarding how and why these particular projects were chosen and why certain options have been disregarded. For instance, how did the EFPAG decide to develop the Microsoft Access Electronic Reporting Tool (ERT) instead of other forms of electronic automation? Additional insight or documentation on how the decisions were arrived at to initiate each of the four identified projects is needed. The final report should also list the steps and work products associated with each project, the schedule for each project, and the points in the process when there will be opportunity for stakeholder input (such as the review of draft work products, access to status reports and comments on associated rulemaking).

C. The Report Does Not Address the Way in Which the EFPAG Projects Will be Addressed in Associated Rulemaking

If the agency intends to create standardized test protocols and test method reports, those could potentially become applicable requirements and as such they will need to be addressed in formal rulemaking. How emissions factors are and are not to be used in a demonstration of compliance with applicable limits and rules will also need to be addressed in formal rulemakings. EFPAG should provide additional information on the interface between these projects and the implementation of related applicable regulatory requirements. As with the projects themselves, the reader needs to know when and how rulemaking will be considered and carried out.

D. The Industry-Sponsored Emissions Testing Process Should be Improved

In many ways, improving the quality of emissions factors in the future will depend on the collection and interpretation of additional source test data. EFPAG has apparently focused its resources on programmatic improvements rather than on the improvement of individual emissions factors. While improvements to the system should maximize the amount of data available for emission factor development while simultaneously improving the accuracy of those emissions factors, EFPAG should first focus its efforts on the collection of data specific to PM 2.5 rather than on programmatic efforts if resources are limited. Notwithstanding our concerns related to PM 2.5, to the extent the agency pursues programmatic improvements the barriers to the collection and use of industry-sponsored emissions testing need to be directly addressed.

During the first stakeholder workshop held in Clearwater, Florida on June 8, 2004, one workgroup focused exclusively on this issue. The workgroup made one proposal: Establish a task force of stakeholders (EPA, State, local, and Tribal organizations, Regional Planning Organizations, STAPPA/ALAPCO, environmental organizations, trade associations, and industry) to:

- Create an administrative structure/process that will govern the development of an emissions factor database, establish QA/QC procedures and protocols, coordinate the development of new test methods, and streamline key processes;
- Improve communication and establish trust between stakeholders, allow open participation by all stakeholders, identify priorities, and manage perceptions; and
- Develop incentives for industry to participate in the program.

The four projects currently underway will address the first bullet to a certain extent. However, these projects may not increase the incentive or motivation for industry to submit new source test data for use in future emission factor improvements. EFPAG has recognized a real concern by industry that voluntarily submitting source test results could affect compliance status. Incentives to industry-sponsored emissions testing in the future, such as providing amnesty and/or reducing compliance and annual testing requirements, could encourage industry involvement. The barriers limiting industry participation should be directly addressed within EFPAG's future projects.

Furthermore, industry regularly submits a substantial amount of source test data for compliance purposes to federal, state, local and tribal organizations. EFPAG should consider a process to collect and submit source test data, possibly through the state/local agencies and eventually to the USEPA for updates to AP-42, within one of the projects currently being implemented (e.g., the "Standardizing Source Test Plans, Reports, and QA Procedures" project). A less cumbersome process will allow industry to provide additional data in a cost effective and timely manner.

E. A Formal Process for Emission Factor Revisions is Needed

EFPAG should include information in this report (or another white paper) detailing how the Agency plans to address the urgent need for development of a legal framework, principles and formal process that will be used to implement availability of, and various applications of, new or revised emission factors. The implementation of revised emission factors will be a major aspect of the program improvement efforts and particularly critical to industries relying on emission factors for compliance purposes (e.g., NSR, Title V, MACT). A transparent process must be in place that will allow for public review and comment on the proposed revision to emission factors and also the opportunity for separate notice and comment about when a revision is appropriately applied in particular contexts.

Emissions factors are included in permits, regulatory requirements (e.g., applicability determinations), state emissions inventories, and are used in other ways as well. It would not be equitable or feasible to attempt to require conformance in these contexts to newly developed or modified emissions factors on an immediate basis, as opposed to a scheduled, periodic review basis. EPA should not delay in developing legal and procedural aspects of updating emissions factors, as was repeatedly emphasized in stakeholder feedback.

F. An Enforcement Framework for Accommodating New/Revised Emission Factors Should be Developed

One potential ramification that the Agency must consider as a result of emission factor revisions is the impact on regulatory compliance. Facilities are subject to a multitude of regulatory requirements that may be dependent upon existing emission factors. In many instances, limits are based on emissions factors and compliance is demonstrated with these same factors. As a result, if an emission factor is revised, one conceivable scenario is that the regulated party could be found to be in violation of an existing regulatory requirement based on changed emissions factors imposed for calculating emissions.

It is also possible that emission factors will be reduced which will yield lower emission levels. This particular scenario may result in a facility that is no longer subject to a certain regulatory requirement. For instance, a facility that was previously a major source subject to the Title V program may actually be a minor source no longer subject to Title V once the emission factor is lowered.

Both of the above scenarios should be addressed in a formal process subject to notice and comment.

G. The Term "Uncertainty" Should be Replaced by the Term "Variability"

One program improvement that is supported under a number of the preliminary options is the use of statistical analyses to quantify what the report characterizes as the "uncertainty" associated with uses of emissions factors. The Alliance is concerned about the use of the term "uncertainty" in this context. Rather, we would propose the use of the term "variability." Variability will always be present in any testing methodology and can be determined or estimated. However, "uncertainty" is not an accurate term when suggesting that it represents an amount that can be estimated or calculated.

The Alliance is concerned that by creating variability statistics for emission factors, permit limits could result in a different measure of compliance. This will also create additional burden on the behalf of regulators as well as the regulated community. The existence of variability should not limit the application of certain emission factors if they represent the best data available. While an emission factor for an operation with greater variability may not be ideal, in many instances this may represent the best data available. The source variability underlying a factor should only be utilized to assist EFPAG with the development of an emission factor rating, which will assist the user with selection of the most appropriate emission factor. One of the projects EFPAG apparently has initiated is assessing the implications that incorporating variability estimates into the emissions factors program will have on the many programs relying on emission factors. If recommendations were to be made in this arena, we expect that to be done in the context of formal rulemaking. However, as we have previously mentioned the information on this project is so limited that we cannot determine if the project captures the situations we have noted above.

H. Details Should be Provided on the Future Distribution of Information on EFPAG's Efforts

The Alliance is interested in EFPAG's future plans to keep stakeholders involved as the emissions factors improvement program moves forward. In particular, it would be advantageous for EFPAG to provide details on the current projects, such as the lead contact for each project and how industry and trade associations can participate in the future. As stated earlier, it would also be necessary to know the work plan or schedule for each project and the program overall. Will decisions and information be provided regularly on a website and will reports/white papers continue to be published documenting the program's progress in the future? These items are important to the stakeholders that have been participating throughout the process and are critical to future efforts and to help promote participation in the program once the improvements are effective.

***

The Alliance and its members appreciate the opportunity to comment on the "Emissions Factors Program Improvement Efforts" report. We look forward to the ongoing improvements to the emissions factors program and plan to continue providing input on EFPAG's efforts as appropriate. We appreciate your consideration of our comments and recommendations at this time. Please contact the undersigned if you have any questions.

Sincerely,

Valerie Ughetta TCK

Valerie Ughetta,
Director of Stationary Sources
202-326-5549
vughetta@autoalliance.org

ATTACHMENT 2
COMMENTS RECEIVED FROM E. I DUPONT DE NEMOURS, INC.

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Note: Text copied from email

From	John A Dege<John.A.Dege@usa.dupont.com>
Sent	08/31/2005 02:50 PM
To	Ron Myers/RTP/USEPA/US@EPA
Cc	John C deRuyter<John.C.deRuyter@usa.dupont.com>, Patricia McGee<Patricia.McGee@usa.dupont.com>
Subject	Re: Extension of Comment Period for the Emissions Factors Program Improvement Efforts report

Thanks for the opportunity to review and comment; the workshops were well run and clearly showed the challenges and limitations of using AP42 factors.
Many different avenues for the future have been documented.

It seems from the report that more extensive regulatory work is in progress that may not be needed.

EPA should at this point include their evaluations etc on the AP42 web site for the poublic to view and notify state/local agencies of its findings and stakeholder inputs.

Thereafter, it should be left to the sources and permitting authorities,etc to determine how best to use the information on limitations,etc. and wheter improvements are needed in the estimates.

From a source point of view, we want maximum flexibility to work with interested regulatory agencies in any improvements that may be needed and in determing the appropriateness in use of the factors. We would not want predetermined prescriptives on changing their use or how to improve since each situation can be unique--even within similar industries and plant production types, boilers,etc.

As was pointed out in the workshops, they are serving a very useful purpose and are used extensively.

Thanks for the opportunity to comment and I would be interested in pariticpating further.

John Dege
Leader- Air Competency
E.I. DuPont de Nemours Inc. (DuPont)
302-773-0900

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ATTACHMENT 3
COMMENTS RECEIVED FROM ANDY MILLER OF THE EPA, OFFICE OF RESEARCH AND DEVELOPMENT, NATIONAL RISK MANAGEMENT LABORATORY, AIR POLLUTION TECHNOLOGY BRANCH

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Note: Text copied from email

From	Andy Miller/RTP/USEPA/US
Sent	08/12/2005 11:13 AM
To	Ron Myers/RTP/USEPA/US@EPA
cc	
Subject	Re: Review and Comment on Emissions Factors Program Improvement Efforts report (Document link: Ron Myers)

Ron:

I do have a few comments on the EF document. I didn't attend many of the workshops, so I can't say whether the items from those are complete.

In section 3.4 on other uses of emission factors, it seems that the issue of why these data are accepted for use in other than inventory development should be discussed to some extent. Even though there is an official disclaimer in AP42, these values still seem to be accepted by EPA as valid data for other purposes, and are certainly accepted by the states for purposes other than inventory development. Given that reality, and the fact that AP42 has grown tremendously over the years, it would seem to me that the generally accepted trend is to rely on emission factors for as many purposes as possible. If that is true, and is not going to be officially discouraged or prevented by EPA, then I think we have the obligation to provide the data in as detailed and accessible a manner as possible. That does point toward the higher cost alternatives at each point. But I think that there is plenty of rationale and external support (NRC reports, etc.) for such an approach.
Obviously that doesn't necessarily translate into financial support, but I think we should at least make the argument for providing data that are as complete, detailed, and accessible as possible.

In terms of data quality, one of the most important things to provide is all the available numerical data on both emissions and process parameters. That will allow users to derive their own conclusions about the quality of data using analyses they may see fit for a particular application. Obviously, some information may need to be withheld to ensure source confidentiality where appropriate (especially on process parameters), but in general, the more data that are made available, the better. In electronic format, providing the supporting data will not be nearly as difficult as was the case when AP42 was strictly hard-copy.
Providing these data will help address many of the issues listed on pages 31 and 32, and will also provide the flexibility to make changes to quality ratings or other aggregations that may occur in the future.

I hope these are helpful.

Andy

C.A. (Andy) Miller, Ph.D.
Air Pollution Technology Branch (E305-01) National Risk Management Research Laboratory US EPA
Office of Research and Development Research Triangle Park, NC 27711 919-541-2920

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ATTACHMENT 4
COMMENTS RECEIVED FROM THE NATIONAL ENVIRONMENTAL DEVELOPMENT ASSOCIATION'S CLEAN AIR PROJECT

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NEDA CAP CLEAN AIR PROJECT

The National Environmental Development Association's Clean Air Project 555 13th Street, NW, Washington, D.C. 20004

Members:
ALCOA Inc.
The Boeing Company
ConocoPhillips Company
DaimlerChrysler Corporation
Eli Lilly & Company
ExxonMobil Corporation
General Electric Company
Georgia-Pacific Corporation
Intel Corporation
Koch Industries, Inc.
Merck & Co.
Occidental Petroleum Corporation
Procter & Gamble Company

Counsel:
Leslie Ritts, Hogan & Hartson LLP

August 31, 2005

Ronald E. Myers
Myers.Ron@epa.gov
Emissions Factor Project (EFPAG)
U.S. Environmental Protection Agency
Research Triangle Park, NC 27711

RE: COMMENTS ON EMISSION FACTOR IMPROVEMENT REPORT

Dear Mr. Myers:

Introduction – NEDA/CAP is filing comments today on the June 2005 Report, "Emissions Factors Program Improvement Efforts," authored by MACTEC. NEDA/CAP is a coalition of manufacturing companies that operate facilities across the country. As indicated in early meetings and survey responses on the emission factor improvement project, NEDA/CAP's members are interested in and affected by changes to emission factors and guidance regarding their use. Project members utilize emission factors for nearly all of the uses listed in Table 4-1 of the Report. Please double-check to make sure that I am included in further mailings and projects updates (LSRitts@HHLAW.com).

As indicated in earlier email to Tom Driscoll, few of our members were unable to download the report from the contractor's website – a project that involved the installation of the contractor's software – often a problem for company servers. The Agency should make this and future reports on which it requests public comment accessible on the Agency's official website. We also endorse the Report's recommendation that EPA should charter a committee under the Federal Advisory Committee Act to receive continued expert advice on the Emissions Factor Improvement Project ("EFIP").

A. EPA Must Investigate the Impacts On Emission Factor Users Associated With Options Discussed in the Report.

The following comments are provided on the options discussed in the Report for overhauling the emissions factor program and AP-42, an emissions factor resource that has been utilized for well over thirty years. Because of the historical usage of such factors by a variety of regulators, *it is encumbant on EPA and its managers to assess and institute*

policies regarding the impacts of changes to emissions factors, and EPA guidance regarding their use before proceeding further with the Project. As NEDA/CAP members explained to EFIP during our August 11, 2005 conference call, the consequences of such changes, particularly on permitting and compliance certifications by various industry sectors could be dramatic as a result of the categories of activities discussed in the Report. In addition to the enforcement consequences, EFIP should weigh carefully the public's likely reaction to conclusions of the final report and how citizen suits based on changes to emission factors will be handled.

Although EFIP says it currently is assessing the implications of incorporating uncertainty into the emissions factors for non-inventory purposes, the analysis already undertaken by contractors underscores the breadth of government-ratified uses of AP-42's collection of emission factors. As Table 4-1, pp. 4-2 to 4-6 of the Report illustrates, accepted uses of the current factors are numerous and go well beyond strictly CAA uses as factors also are utilized for CERCLA release reporting and even uses by the military. Such uses include:

national inventories
state emissions inventories
estimation of excess emissions
consent degree emission estimates
EPA and industry-specific compliance guides
compliance demonstrations
permit compliance demonstrations
emissions trades and banking transactions at the federal and state level
modeling of criteria and hazardous air pollutants
NSR/PSD netting calculation and NSR/PSD permit applicability
possibility of Plantwide Applicability Demonstrations (though most we are aware of are based on direct or parametric monitoring)
BACT analysis
BART analysis
State Air Toxics Compliance
State Air Toxics Modeling
EPA Models and Computer Databases, including FIRE, EDMS, and Water
Armed services applications, including Fate and Transport Studies
TRI Reporting and models under EPCRA
Health Risk Assessments
Hazardous assessments

Notwithstanding admonitions in the Introduction to AP-42 dating back to the original April 1970 edition[1] regarding the limitations of many factors and in later editions warning users not to apply emission factors for permitting analysis, it is clear from the

[1] TRW, prepared for Department of Health, Education and Welfare, "Air Pollutant Emission Factors," p. 1-3 (Apr. 11, 1970).

Report that by necessity EPA and state air pollution control authorities have frequently needed and used appropriately the AP-42 factors for these other purposes. Our members also have confirmed that factors continue to be used for a wide range of regulation activities. The Report confirms that 28 subparts of the Code of Federal Regulations under the CAA incorporate emissions factors, and AP-42 specifically, by reference, notwithstanding the limitations to AP-42 itself.

The reason that factors continue to be used and continue to be especially important are multiple. First, because of emissions variability over short and long time periods, emissions fluctuate and the use of average emissions is the only tool available for many types of sources, which can not be tested easily because of engineering and economic limitations. Also any particular measurement will not necessarily be a good representation of actual emissions at another point in time, so many companies, in addition to relying on AP-42 developed by EPA, also rely on factors for similar types of sources that they and their equipment vendors develop. Factors developed from such measurements at similar sources are vital surrogates for compliance testing and emission planning. Permitting authorities use factors to establish permit limits for the same reasons. Second, until equipment has been constructed, it quite simply cannot be tested. Emissions factors are vital tools for permitting sources that are planned to be constructed. Third, factors are critical for certain types of releases that cannot be measured directly, such as fugitive emissions or for purposes of TRI reporting.

Transitioning the Program – EPA's efforts should focus on both the use of emission factors in the future and transitioning the program forward to account for the past uses. For every use identified in the five pages of Table 4.1, there is a consequence to past users if the factors are disapproved for use or are revised. EPA should shield companies from noncompliance enforcement resulting from changes in AP-42 factors if AP-42 factors have been relied on in good faith. As we have recounted to EFIP, increases in emissions factors have in the past led directly to numerous enforcement actions under the Clean Air Act and unexpected changes by regulators to permit limits, sometimes without prior notice to regulated facilities whose permit limits have been changed as a consequence. Until and unless EPA analyzes these consequences, it should not issue new guidance on using emission factors. The Agency also will need to consider what, if any, rulemaking may need to be pursued given the incorporation of AP-42 into various federal regulations cited in the Report.

Conduct An Impact Assessment Now – Since EPA's work already has led it to conclude that over half of current factors graded "A" underestimate the mean value of emissions by half,[2] an impact estimate to programs listed in Table 4.1 may be prudent before EFIP proceeds. Such an assessment may be particularly helpful in anticipating an emission factor transition policy. Only with this type of understanding at the onset can EPA avoid substantial collateral damage to EPA's regulatory programs and to the nation's industry, both which have relied heavily and appropriately on the use of emission factors.

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[2] See p. 5-7.

In addition, these changes also may have an affect on the public's overall perception of Clean Air Act programs.

Impacts That We Anticipate – Certain impacts are likely:

- **Current SIP Planning** – Although EPA's contractors suggest that variability in the emissions factors of various industries may "even out" the net changes to individual factors, application of options in the Report seem more likely to greatly increase state emission inventories and further complicate current ozone and PM-2.5 NAAQS planning just about spring 2007 when SIP revisions must be submitted to EPA.

- **Noncompliance** – The proposed options suggest the application of multipliers or standard deviations to mean values where there is a range of emission factors when factors are utilized for compliance purposes are likely to be recommended. This will likely result in companies that have smaller compliance margins facing immediate noncompliance despite good pollution control practices. If EPA were to implement any of the alternatives that were discussed in the workshops for utilization of factors for non-inventory emissions uses, such transition policies would be critical since even factors that currently overstate emissions would create potential noncompliance if doubled or tripled for certain uses.

- **State Part 70 Permits** – Revision of some operating permits will be required to reflect changes in particular industry emissions factors and/or guidance on their use. . For instance, a source may have a limit on boiler NOx of 99 tons per year and attainment of that limit was demonstrated by limiting natural gas consumption to a certain number of Therms. Doubling the NOx emission factor effectively halves the allowable operation. Such changes could require public notice for individual permits, magnifying the administrative cost to State permit authorities of changes to permits themselves.

- **Retroactive Permit Liability** – Because regulators and regulated industry have long-used factors for preconstruction permitting, as recommended in the PSD rules and EPA Guidance, changes to factors are likely to create situations where sources may be inappropriately held alleged to be retroactively liable for proper past actions that are now construed as state and federal permitting violations.

- **Changing to Emissions Factors Into the Future** – Since another conclusion of the Report appears to be that there will be a continued need for emission factors and therefore a continuing collection of stack test and other data on industry emissions to enhance them into the future, EPA also must consider, at the outset, continuing changes to emissions factors and the impact that such continued changes will have on the regulated community.

- **Methods** – We foresee the results of EPA's initial analysis of Methods 1-5 and Method 202 to also affect past and ongoing compliance determinations using these

factors and the testing methods. This underscores once again the need for communication and limitations on the immediate application of EFIP analysis. In addition, NEDA/CAP members would like to suggest that rather than focus on Methods 1-5 and Method 202, that you focus on developing test methods and factors for the measurement of PM 2.5, which are so badly needed and are of a higher priority in our viewpoint. Establishing effective and representative methods and factors for PM 2.5 is of more immediate concern considering the imminent requirement of SIP submittals for PM 2.5 by the states.

Transition Guidance Needed Now – In the several meetings NEDA/CAP has had with the Emissions Factor Improvement Project team, we have emphasized the importance of several of these issues, and recommended adoption of transition guidance based on good faith use of prior emissions factors. This Report, and particularly the 5 page recitation of all of the federal requirements that incorporate references to use of AP-42 factors for emissions inventory preparation, compliance, and permitting, underscore the need for such a transition policy that emphasizes that sources should not be subject to enforcement and will be granted amnesty from any enforcement based on good faith use of appropriate available emissions data. Consideration also should be given to additional guidance prohibiting these "variability" factors doubling or tripling factors from being utilized in rewriting emission limits in operating or preconstruction permits.

B. NEDA/CAP Supports the Continued Need For Better Emission Factors.

Subject to our above concerns, NEDA/CAP supports enhancing emissions factors. Even though improvements in technology continue to make direct and parametric monitoring technology more technically feasible and economic and new technology for remote monitoring of emissions is being developed, NEDA/CAP's members believe there will be a continued need for emissions factors. The factors, however, will not be helpful unless they are simple to apply, particularly for predictive uses where other data does not exist. To the extent that it becomes unclear to users, and to the public, what the factors actually are, and how they are to be used, they are less helpful. For instance, many users may not be well-versed in the statistical analysis that this Report suggests might be recommended for certain users. Policies for their use also cannot be punitive.

Furthermore, as previously discussed with EPA EFIP staff, NEDA/CAP members are concerned about the Agency's use of the term "uncertainty" in the context of using statistical analyses to quantify the "uncertainty" related to the uses of emissions factors, NEDA/CAP recommends that the term "variability" be used in lieu of "uncertainty" as the latter term indicates that perhaps a certain level of ambiguity or vagueness exists with stack testing itself and thereby the subsequent establishment of emission factors. On the other hand, the term "variability" is more indicative and representative of the stack testing methods themselves and also recognizes the fact that variability within a process does occur and that the data generated may still correspond to the best data available.

In view of concerns over the future continued utility of emission factors, has EFPAG stepped back and analyzed why and for what programs it intends to allow the use

of emission factors over the next ten years that will justify the ongoing sizeable investment? If, for example, sources are not allowed to use emission factors for permitting, or those factors are banded by broad uncertainties that cause one to have to triple the average value in a range or apply statistical analysis, then the investment contemplated by the Report may have limited returns.

C. Assessing and Documenting the Quality of Source Tests.

The problem that EPA identifies with emission factor quality is the origin of the data, that is stack testing. Thus the EIP has begun to assess the quality of sources tests by characterizing and quantifying uncertainties associated with several stack testing methodologies. Currently, EFPAG is assessing the quality of several stack testing methods, Methods 1-5 and Method 202, and has quantified the maximum measurement error that would occur by applying the method and the error in concentration or emission rate that would occur by varying test parameters. In addition, staff are evaluating the uncertainties that result when stack tests deviate from the prescribed methods. EFPAG also is analyzing source test plans to standardize the plans and reports and associated QA procedures. Options being considered include:

- Eliminating the existing test data rating system and designating test data as applicable or inapplicable;
- Accepting only test data for use in EF development certified by a third party review;
- Continuing to use the existing data rating system, but developing clear guidelines for assigning data quality ratings to data; revising the existing test data rating system with a wider range of quality ratings;
- Replacing the existing rating system with a system that allows uncertainties to be quantified; and
- Implementing a data quality quantification regime and developing guidelines for SOPs for assessing process and emissions control device operating conditions during source tests.

First, the Agency must be cautious that its focus remains on emissions factors and not emissions testing. NEDA/CAP has been particularly concerned and is currently litigating EPA's 2004 "National Stack Test Guidance," which we contend was issued by the Agency and alters existing regulations and prior EPA guidance without public review. See, NEDA/CAP v. EPA, No. 05-1107 (D.C. Cir. 2005). It is difficult to tell from the Report if EFIP intends to apply the new data rating improvements to all stack testing and stack test plans, or just those plans used to establish emission factors. Changes even to Quality Assurance Procedure for "old" Stack Test Methods 1-5 and 202, the subject of EPA's initial efforts, are included in existing (mostly NSPS) rules. Thus, if the intention of the exercise is limited to "certain" stack testing that will be used to make all emission factors more robust, that intent should be clearly stated to avoid ancillary regulatory problems.

Third Party Certifications – NEDA/CAP objects to the need for third-party certifications of emission testing in general. We hope that this recommendation was

intended to be limited to testing for AP-42 factor development, but such limitation is difficult to read into the report which appears to contemplate all stack testing become part of the dynamic improvement of emissions factors ongoing into the future. Many of NEDA/CAP's members employ stack testers. Can they be certified? Also, the cost of such certifications and practical implications need to be considered if such a requirement is going to be applied broadly to all stack testing. If not, how will EPA limit the requirement to only stack testing used for AP-42 factor development? Will it affect company testing to develop process-specific factors used by the company as well? As we have documented for EPA on prior occasions, source testing for combustion and other process equipment can range upwards of $50,000 per emissions point, which is one of the reasons that the use of AP-42 or other emission factors derived from source testing at a site is so much preferred. Third party audits on tops of these costs, for multiple emission points, can explode this cost, whether shouldered by regulatory agencies or industry. How many dozens of data points are needed before a factor is considered robust, and how frequently does EFPAG envision such testing will be needed for various different types of equipment? Will this exercise guarantee that resulting factors can be used for permitting purposes in lieu of additional testing?

NEDA/CAP is concerned that reliance on such third-party certifications be limited to certain stack tests used to establish emission factors and not extend to all source tests. The obvious potential for migration of this requirement into annual source testing and Title V monitoring and Title V compliance certifications has to be considered.

D. <u>Assessing and Documenting the Quality of Emissions Factors.</u>

This project of course is critical to the fate of the emissions factors program because it will create a constantly changing group of factors as source tests continue to augment information. In this brave new world , there is no certainty as to when a certain factor can be utilized, particularly if it is likely to change. Most professionals would find it difficult to argue that the current "A-E" rating system is subjective, but it does simplify uses which have been accepted for over thirty years. If it is replaced with broad ranges and procedures for drawing inferences about uses based on statistics, it will lose usefulness.

E. <u>NEDA/CAP is Concerned About Automating Components of the Emissions Factors Development and Delivery Process Changes to Regulations Necessary for Automating Data.</u>

Current emission factor information is available off the TTN, principally from CHIEF where AP-42 is located. EPA is in the process, according to the Report, of Beta-testing an automated mechanism to standardize the development and submission of source test plans and reports, as well as standardize the test plan and QA procedures for the collection of data used to establish emission factors. Currently, EFPAG is proposing to utilize Microsoft ERT to allow reviewing agencies to assess the quality of source test results. The following options are being considered:

A. Component A – Source Test Planning, Evaluation, and Delivery

- No changes from present procedures would be implemented.
- Standardized formats and data elements would be defined for source test reports.
- Standardized formats and data elements would be defined for source test protocols, test reports, and quality assurance forms.

B. Component B – Storage and Availability of Source Test Data

- Source testing documents would be collected from State, local, and Tribal agencies by EPA or EPA-sponsored contractor personnel on a regular basis.
- EPA would receive source test data from State, local, and Tribal agencies in electronic format.
- Source testing documents (test protocols, test reports, and quality assurance forms) would be stored on State, local, and Tribal agencies' public servers.

C. Component C – Analysis of Source Test Data for Emissions Factors Development

- EPA would use optical character recognition technology to capture applicable portions of the source test report and State/local/Tribal agency source test assessment.
- EPA would receive data in formats precluding the use of optical character recognition.
- Data rich text would be captured and used for the emissions factors development process.

D. Component D – Dissemination of Emissions Factors and Related Information

- No changes from present procedures would be implemented.
- Emissions factors and related information would be made available through an automated system similar to those used by stock trading and information web sites. However, the ability to customize emissions factors to meet an end user's specific needs would not be provided.
- Emissions factors and related information would be made available through an automated system similar to those used by stock trading and information web sites. The system would be designated so that the end user could tailor emissions factors to meet their specific needs.

NEDA/CAP's overarching concern is any mandatory requirement for the reporting of stack test data not otherwise required by an applicable Clean Air Act requirement. We assume, but would appreciate reassurance, that it is not EPA's intent to

broaden existing reporting requirements under this project. Also, we reiterate our concerns regarding the migration of the requirement for use of a particular software requirement for reporting source testing plans and data into general state and federal air programs not related to emissions factors.

In addition, with regard to Component D, NEDA/CAP is not convinced that delivery of emissions factor information needs to be fixed. The current CHIEF database is user-friendly and free. Although the Report does not discuss user fees that may be implicated in stock trading and information web sites (particularly if hosted by third parties), we do not believe that user fees should be charged for information that should be shared to benefit the environment. Limiting access to such information could have many negative consequences.

F. Providing Guidance Regarding the Use of Emissions Factors for Purposes Other Than Emissions Inventories.

This option and ongoing EFPAG work discussed in Part 5 and Appendix D of the Report deeply concerns NEDA/CAP's members. In Part 5, MACTEC states that EFPAG has initiated a project to understand and quantify uncertainties associated with the development of emissions factors and the application of emissions factors "to achieve various program objectives." EFIP officials told us that they expect that certain guidance has been drafted and may be available for public review this fall.

Options under consideration include:

- Defining the manner in which emissions factors may be used based upon the existing emissions factors rating system.
- Arbitrarily adjusting emissions factors for use in specific applications.
- Adjusting emissions factors for use in specific applications using statistical data.

Thus far, the effort has been limited to analysis of current emissions factors graded "A." On the basis of statistical analysis, EPA's contractors have determined:

> "The 95% confidence value may be as much as 10 times the mean value." [p. 47]

> "More than half of emissions factors developed will tend to underestimate the mean value." [p. 47]

These conclusions could auger poorly for the use of emissions factors past, present, and future. NEDA/CAP will be keen to learn what policy inferences EFIP draws from these conclusions. As we detailed above, it also will be important to consider the impact of such analysis for specific factors on the public's concerns generally for air programs and the likely effect such policies will have on compliance in general.

In conclusion, NEDA/CAP feels that this work could have wide-reaching consequences for compliance and air quality management in general and we ask that EPA understand and consider those consequences before taking actions to implement many of the options in this paper. Because of the importance of this work, we want to be involved and participatory in the process and we look forward to future dialogue on the EFIP. Please do not hesitate to contact me or any of our members for additional information. A list of company officials is attached for your convenience.

Sincerely,

Leslie S. Ritts
Counsel to NEDA/CAP

NEDA/CAP Members:

Michael Palazzolo	ALCOA Inc.
Jerry Fulmer	ALCOA Inc.
Edward Ferguson	The Boeing Company
Jan Laughlin	ConocoPhillips Company
Debby Rowe	DaimlerChrysler Corporation
Patricia Strabbing	DaimlerChrysler Corporation
Bernie Paul	Eli Lilly & Company
Jodie Mitchell	Eli Lilly & Company
Barbara Bankoff	Eli Lilly & Company
Vic Carlstrom	ExxonMobil Corporation
Robert Morehouse	ExxonMobil Corporation
Robert Nolan	ExxonMobil Corporation
Steven Meyers	General Electric Company
Robert Kaufmann	Georgia-Pacific Corporation
Todd Rallison	Intel Corporation
Don Clay	Koch Industries, Inc.
Hannah Valmont	Koch Industries, Inc.
Michael Babos	Merck & Co.
Todd Hyde	Merck & Co.
William Al Collins	Occidental Petroleum Corporation
Maxine Dewbury	Procter & Gamble Company
Ann Bailey	Procter & Gamble Company

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ATTACHMENT 5
COMMENTS RECEIVED FROM THE NATIONAL LIME ASSOCIATION

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National Lime Association
LIME
The Versatile Chemical

August 31, 2005

Mr. Ron Myers
U.S. Environmental Protection Agency
Emissions Factors & Policy Applications Group, C339-02
Research Triangle Park, NC 27711
VIA E-MAIL: Myers.Ron@epamail.epa.gov

Re: Comments on AP-42 Emissions Factors Program Improvement Report

Dear Ron:

EPA has asked participants of the four workshops whether the June 2005 report entitled "Emissions Factors Program Improvement Efforts" accurately captures the proceedings of these workshops. I attended the August 25, 2004 workshop at EPA Headquarters. Although the summary of that workshop in the main report seems accurate, Appendix D does not accurately describe the pitfalls of misusing AP-42 emission factors.

Appendix D is entitled "Preliminary Emissions Factors Program Improvement Option Paper 4: Providing Guidance Regarding the Use of Emissions Factors for Purposes Other than Emissions Inventories." This Appendix implies that all AP-42 emission factors accurately represent <u>average</u> emissions from a source category. For example, Table 4.1 includes the following entry:

Permitting	
Application	*Comment*
Regulatory Applicability Determinations. AP-42 emissions factors are often used to determine whether a regulation is applicable to a specific facility.	AP-42 emissions factors represent an **average** range of emissions rates and are not precise enough for regulatory applicability determination. If a facility is required to test, it has only about a 50% chance of being in compliance. (emphasis added)

Furthermore, Table 4.4 on possible future uses of emission factors characterizes **all** AP-42 emission factors as representing "average" emissions for a source category:

Emissions Inventories	
Application of Emissions Factor	*Option 4.2/Option 4.3*
National Emissions Inventory Guidance	Average
State Emissions Inventory Guidance	Average

EPA needs to be very precise on the question of when AP-42 emission factors truly represent "average" emissions for a source category.

Furthermore, AP-42 factors may be quite dated and therefore not represent current operating practices. EPA needs to provide guidance on this issue, as well.

In our experience, this guidance is critical because regulators are ready to use any emission factor, regardless of its rating. Low-rated factors are even less likely to represent "average" emissions. Most of the emission factors for lime manufacturing are D- and E-rated (2 of the 65 emission lime manufacturing factors are C-rated, 63 are D- or E-rated). Most are based on single tests conducted in the 1970s or 80s. In the Lime MACT proposed rule, EPA estimated emissions from stone handling operations at lime plants using AP-42 emission factors with "E" (i.e., poor) ratings based on 1974 vintage data. More reliable and recent data that were available to EPA at the time showed that the E-rated factors emission factors were 20 times too high.

Appendix D, as currently worded, will compound misconceptions and misuses. EPA needs to revise this appendix to emphasize that emission factors may not represent an average for a source category, nor may they represent current practices.

Thank you for the opportunity to comment.

Eric Malès
Director of Regulatory Affairs

ATTACHMENT 6
COMMENTS RECEIVED FROM THE NATIONAL STONE, SAND & GRAVEL ASSOCIATION

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NATIONAL STONE, SAND & GRAVEL ASSOCIATION

Natural building blocks for quality of life

August 31, 2005

Mr. Ron Myers
U.S. Environmental Protection Agency
Emissions Factors & Policy Applications Group, C339-02
Research Triangle Park, NC 27711

Re: Technical Comments Concerning Proposed AP42 Emission Factor Improvement Program

Dear Mr. Myers:

The National Stone, Sand & Gravel Association (NSSGA) submits the enclosed technical comments concerning EPA's proposed revisions to the AP42 emission inventory program. These comments address the information provided in the document titled, "Emissions Factors Program Improvement Efforts" dated June 2005 prepared by Mactec Federal Programs, Inc. These comments are divided into three categories: (1) major comments concerning the Emission Factor Program Improvement Efforts, (2) recommendations concerning an effective approach to emission factor improvement, (3) technical comments generally applicable to the entire document, and (4) technical comments concerning the specific options discussed in the cover document and the issue papers included with the cover document.

NSSGA hopes these comments are helpful in EPA's review of the emission factor improvement program.

Sincerely,

John S. Hayden, PG, REM
Vice President, Environmental Services

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NSSGA COMMENTS CONCERNING THE
U.S. EPA EMISSION FACTOR IMPROVEMENT PROGRAM
August, 31 2005

Major Comments Concerning the Emission Factor Test Program

Emission Factor "Policy" Changes - The implicit assumption underlying the entire process being sponsored and directed by the Emissions Factors and Policy Applications Group ("EFPAG") is that changes in the emission factor program are strictly policy issues. While that might have been correct prior to the Clean Air Act Amendments of 1990, it is now clear that since 1990, the emission factors are being used to assess permit fees and determine regulatory applicability. Changes in emission factor development and calculation procedures must be considered as formal rule making. This is the single most important issue involving the EFPAG program to modify the AP42 emission factor program.

Specificity and Clarity of the Options Being Evaluated - The options discussed in the document and in the supporting issue papers are discussed in only general terms and with a complex set of convoluted and interrelated options. Due to the lack of specificity and clarity, it is not possible to adequately evaluate the changes being considered by EFPAG and its contractor.

Overstating Support - On page iii of the Executive Summary of the cover document, Mactec states that "EFPAG recognized several universally supported directions for the future emissions factor program." As stated in the March 3, 2005 letter from Mr. Kurt Blase to Mr. Steven Page, the industrial associations represented by Mr. Blase considered some of the possible changes involving AP42 to involve formal rulemaking. Contrary to the statement on page iii, there is no "universally supported" position with respect to policy changes that affect regulatory applicability.

Comments Not Complete - These comments do not address all of the issues potentially of concern. We reserve the right to submit additional comments once the options being considered by EFPAG are described with more specificity and clarity.

2. Recommended Approach

These comments address a number of major administrative, technical, and legal issues affecting the EFPAG emission factor improvement program. Despite the fact that we have significant concerns with the present document and EPA program, we would like to participate in a constructive manner in the program to upgrade the development and delivery of emission factors. Accordingly, we would like to propose a relatively simple and straightforward program to ensure that accurate emission factor data are compiled and made available to the emission factor user community in a timely manner. The recommended emission factor development and delivery procedures involve the following ten steps.

1. Develop electronic spreadsheet forms that can be used for the submittal of emission test data and quality assurance data from emission tests for a wide variety of test methods.
2. Develop a standard guideline that expands on existing guidance for the preparation of an emission factor test report that documents process operating conditions, control technique

operating conditions, quality assurance results, and representativeness of the source operation during the test program.

3. Accept only data from emission tests conducted specifically for the purpose of emission factor development that include an analysis of the representativeness of the source tested with respect to the overall population of sources.

4. Develop a manual evaluation procedure to identify tests conducted on sources not adequately representative of the overall population of sources included in the AP42 section.

5. Develop a statistical evaluation procedure to screen out outlier data.

6. Develop an EPA program to take the electronically submitted data and conduct basic quality assurance reviews. Reject reports that fail to adhere to EPA reference methods (when applicable) or fail to include the necessary documentation to facilitate an independent quality assurance evaluation. Prepare summary statistics, including the median, mean, standard deviation.

7. Create a peer review process for review of the electronically provided test report and test data summaries. This peer review process should be similar to those used in determining the suitability of technical articles for publication. Peer reviewers should include EPA, state, and local agency personnel, industrial associations, emission testing organizations, and other individuals with expertise in emission factor testing.

8. Update an electronic version of the AP42 section when favorable peer review comments are received from a majority of peer reviewers.

9. As time permits, convert and evaluate the previously submitted emission factor test data.

10. As part of the review of existing AP42 emission factor data, retire old data that were obtained under conditions that are no longer representative of the industy addressed in the AP42 section.

This general approach is relatively simple and minimizes the cost and complexity of the processing system to be developed by EPFAG. This process can provide high quality emission factor data in a timely manner in a process that is transparent and open to the entire community of emission factor users.

3. Generally Applicable Technical Issues

Stakeholder Survey - EPA has not conducted an adequate survey of emission factor users to evaluate the necessary changes and improvements to the emission factor program. Many industrial groups actively participating in upgrading AP42 emission factors were omitted in the informal survey conducted by EFPAG. The trade associations ignored by EPA included the National Stone, Sand & Gravel Association, the National Ready Mixed Concrete Association, and the Portland Cement Association. It is probable that many other trade associations and other industrial groups have been omitted from the haphazard survey that EPFAP has used as the foundation for the proposed changes. This survey should be repeated in a more formal and inclusive manner.

Use of Emission Factors for Enforcement - Mactec reports in various locations of the cover document (i.e. page iv) and in the attached issue paper that some stakeholders are requesting guidance on the use of emission factors in "enforcement applications." This is an inappropriate use of emission factors. No guidance should be prepared.

Assessing the Quality of Source Test Reports - Mactec reports that EFPAG has identified "assessing and documenting the quality of source tests" as one of the four main program elements to be addressed; however, the information compiled by EPA does not provide a clear technical basis for concluding that the variability observed in emission factor data sets is due to source test quality as opposed to source-to-source variability and source specific routine variability. This suggests that EFPAG is taking an approach based more on preconceived opinions rather than an adequate evaluation of the presently available information in the AP42 data sets.

EPA Reference Method Test Method Biases - Mactec does not discuss emission factor data uncertainty related to biases included in the EPA test methods. For example, Method 202 used to measure condensable particulate matter can be biased to values significantly above true levels due to reactions of sulfur dioxide in the impinger solutions and/or the absorption of soluble organic compounds. EFPAG should carefully screen all data presently in AP42 or submitted for inclusion in AP42 to eliminate any data obtained by EPA reference methods that are subject to significant error.

Relevance of Previously Obtained Emission Factor Data - The AP42 process does not presently include procedures to delete emission factor test data that are no longer applicable due to changes in the industrial processes or regulatory requirements. For example, the portland cement industry has reduced emissions of polychlorinated dibenzo-p-dioxins and polychlorinated dibenzofurans ("dioxin-furan") in response to a MACT standard. All dioxin-furan emission data obtained prior to approximately 2002 are no longer representative due to the gas stream temperature reductions that minimized dioxin-furan emissions. It is extremely misleading to continue to include the historical data that are no longer representative of any operating plant in the country. Frequent updating of AP42 is needed to prevent this significant error.

Availability of Review Materials - The draft materials needed to review the emission factor improvement program were available only on the Mactec website. It was necessary to download ActiveX™ to access the files. This places reviewers at risk that the software being downloaded has parasite programs attached that could damage computer systems, create identify theft risks, or compromise confidentiality of other resident files on the receiving computer systems. All resources needed for reviewing EPA materials should be readily available on the EPA website without the need for EPA contractor supplied software and websites.

Adequacy of Existing Emission Factor Data Sets - The emission factor program improvement document and the overall review process being conducted by EFPAG and Mactec do not appear to involve detailed evaluation of various existing emission factor data sets available in AP42. Rather than relying entirely on stakeholder comments, it would be helpful to assess a diverse set of emission factor data sets. This assessment could include a detailed evaluation the adequacy of the emission tests, the methods for characterizing the representativeness of the sources tested, and the measures of uncertainty assigned to the emission factors. Using this approach, some of the options being discussed in the Mactec document could be discussed with a much greater degree of specificity. The consequences of the various options proposed by EFPAG could be

more adequately evaluated with a variety of detailed examples. In its present form, the document is far too abstract and does not appear to progress much beyond an agency wish list.

Stack Tests that Deviated from Accepted Methods - As indicated in the Executive Summary and in the attached Issue Option Paper, EFPAG is apparently attempting to evaluate the "...uncertainties that result when stack tests deviated from the prescribed methods." It is extremely difficult to accurately evaluate the errors introduced into test results due to deviations from the reference test methods. If the deviation is significant, the test results should not be tabulated as part of AP42. If the deviation is insignificant, the test result should be accepted.

Availability of Information Concerning Options - On page v of the Executive Summary, Mactec states that "All of the options were made available to prospective stakeholders prior to workshops." Many of the trade associations participating in the workshop in Washington, D.C. in August 2004 were not aware of the options being considered by EPA to quantify emission factor uncertainty. As stated earlier in these comments, formal rulemaking is required for any changes that affect the use of emission factors in assessing permit fees and/or in determining regulatory applicability.

General Citings - Throughout the document, Mactec refers to the "respondents" and "attendees" as if they comprised a monolithic group of like-minded individuals. There were substantial differences of opinion. Rather than the highly generalized and over-simplified citings, Mactec should cite specific comments made by specific "respondents" and "attendees."

Linkages, Page 7 - Mactec reports that one unnamed respondent would like EPA to determine if it would be reasonable and possible for EPA to provide links to "other emission factors that are available." This comment further supports the clear need to consider emission factors as an integral part of the regulatory process and to treat changes in emission factors as rule making. The possible change being addressed by this respondent would open up the EPA database to a wide variety of potentially unscrutinized "linked" emission factors that would suddenly have the status of EPA approval. This could lead to significant regulatory abuse.

Original Data Sheets - The statements included on pages 12 and 13 concerning original data sheets are internally inconsistent and in error. Concerning the need to include "original raw data sheets" in the emission factor test report, it is important to note that the source sponsoring the test and the testing contractor must retain original copies of these records due to numerous legal requirements. These cannot be released to EFPAG. However, acrobat copies of the raw data sheets should be in each and every emission test report. The statement that, "If the final test report is of high quality based on the other criteria, the quality rating should not be lowered because of a lack of data sheets", is sheer foolishness. It is essentially impossible to assess even the most basic quality assurance aspects of an emission test without raw data sheets. It is not too much to ask the supplier of the report to include photocopies (paper or electronic) of all raw data sheets. If the data sheets are not available, the data should be discarded. Furthermore, any emission factor data presently included in AP42 based on emission test reports without raw data sheets should be deleted.

Efforts Required for Emission Test Rating - Mactec states that the level of effort required to review air emission tests averages 4 hours. Considering the widespread use of emission factors and the consequences of emission factors, this does not seem to be "very time consuming."

Convoluted Options - The discussions provided by Mactec concerning the various options for upgrading portions of the emission inventory process are highly convoluted and difficult to fully understand. For example, Option 2.4 for emission factor assessment refers to:

> (1) procedures of Option 2.3 that involves the implementation of Option 2.2, (2) Option 1.6 for emission test data which is based on Option 1.5 , and (3) either data automations options B2 or B3.

Consequently, understanding Option 2.4 requires the integration of highly generalized information provided concerning six additional options. Clarity is lost in this tangled mess of options. The issue papers attached to the summary document do not provide much information in addition to the material in the summary document. At the very least, a few examples based on an existing AP42 section would be helpful in demonstrating the intent of Mactec and/or EFPAG.

Screening Data for Outliers and Non-Representative Extreme Values - Option 2.4 concerning emission factor assessment includes a step for the screening of data. This should more properly be termed the identification of outliers or extreme values that are not representative of the main population of sources represented by the AP42 section. It seems obvious that the screening of outliers or non-representative extreme emission factor values is a fundamentally important emission factor quality assurance procedure that should be part of any emission factor assessment option.

4. Option Oriented Issues

Option 1.1 State and Local Agency Approval - The statement ,"Test data ...deemed inappropriate for emission factors development by a state/local agency would be rated not applicable." is inappropriate. It is important to remember that state and local agencies receive a major portion of their operating budget from permit fees, which are emission factor dependent. These agencies have a vested interest in not approving any emission factor tests that might adversely impact the agency budget. Accordingly, these groups have a vested interest in preventing the adoption of emission factors lower than the factors presently in the emission factor data set. State and local agencies must not be given veto power over the inclusion of properly conducted emission tests that potentially impact their budget.

Option 1.2 Certified Industrial Hygienists - Certified industrial hygienists do not necessarily know anything about air emission testing, and emission factor testing specifically. The personal exposure monitoring conducted by most industrial hygienists is much different from ambient air emission testing.

Option 1.2 State and Local Agency Certification - The comment made earlier, with respect to Option 1.1 concerning the vested interests of regulatory agencies with regard to emission inventory based permit fees, applies equally well to this option.

Option 1.3 Clear-Cut Review Guidelines - This general approach appears reasonable; however, Mactec states, "The disadvantages to implementing this option are that it would not ...provide any information regarding the uncertainties of the test results or the uncertainties associated with the process data measured." There is no reason that the variability of the emission factor test results and the process "activity" data could not be characterized in the test results or by the reviewer of the test report. This is not a reason to dismiss Option 1.3.

Option 1.4 Test Report Scoring - The numerical scoring technique described in Option 4 appears to be highly subjective and labor intensive. It is not clear how this highly detailed scoring technique will be of help or value to anyone.

Option 1.5 Quantification of Uncertainties - EPA appears to be confusing the quality of the emission test data with the routine variability of the source. It is possible to have a high quality and accurate emission test data set for a process that is subject to a high level of routine variability. Based on the discussion provided by Mactec with respect to Option 1.5, these data would receive a low rating due to the variability. Conversely, a poorly conducted test on a relatively stable source would potentially receive a high rating. It is possible to adequately assess and characterize the variability of the data while independently evaluating the overall quality and accuracy of the test data. This approach is similar to that advocated above with respect to Option 1.3.

Option 1.6 Quantification of Uncertainties and SOPs - In this approach, EPA or its contractor are committing to an extreme labor intensive and comprehensive program to "...develop guidelines and standard operating procedures (SOPs) for assessing process and emission control device operating conditions during source tests." Even a cursory review suggests that there is an extremely diverse set of industrial categories represented in AP42. Within each category of sources, there are a large number of process and control device variations. It will be hard to provide a fair and accurate set of guidelines. It is likely that this effort will dissolve into a highly superficial and useless document. Mactec continues by stating that, "The guidelines would include predicted uncertainties so that uncertainties could be assigned to the process data in a manner similar to that for the emissions data." The most generous response that can be made to the suggested "predicted uncertainties" is that there is no basis whatsoever for predicted uncertainties for the large majority of sources addressed in AP42. In a document that bemoans the technical effort required to review test reports and expresses concerns over even a modest four-hour time investment, the application of predicted uncertainties appears to be far overreaching.

Section 3.3 Automating Components of the Emission Factors Development and Delivery Process - Mactec has prepared a set of options concerning source test plans, data storage, date evaluation, and data availability arranged in a set of hierarchical options based on the level of automation. In all four subcategories, at least one of the options involves an unrealistic "high automation" approach that should not be considered at this time. For example, with respect to "Component A," there is no reason to require the use of what is termed "data rich" environments. Air emission testing firms, trade associations, and state and local agencies could use readily available spreadsheet and word processing programs using Option A2 rather than requiring special software that many users, especially in state and local agencies, might not have available or in which their employees are not suitably trained. With respect to "Component B," there are many potential issues involving scanning source test reports into an electronic format and inclusion on agency websites. One of these issues is that many test reports contain highly confidential data, and the release of this information would harm the source. It is hard to imagine how "data mining software" could be used to obtain high quality and complete sets of test data that could be adequately evaluated prior to inclusion in the emission factor data set. Any program going beyond Option B2 is inappropriate. With respect to "Component C," it is unclear why EPA is concerned about "optical character recognition" considering that all of the new test reports could easily be provided using one of the standard word processing programs. It is also unclear how

the optical character recognition software would capture flowcharts, figures, and photographs that often provide highly useful information for evaluating the representativeness of the source tested and the adequacy of the test procedures used in the test program. A properly conducted and documented test report is much more than a set of words and numbers. It is also important to note that the discussion of "Component C" is, at the least, muddled. With respect to component D, considerably more information is needed to clarify the advantages and possible significant limitations of an "...automated system similar to those used by stock trading and information web sites." It should be possible to develop an option between D1 and D2 that provides new emission factor data in a timely manner without leaping to what appears to be an overly complicated automation approach that will not have built in quality assurance review procedures.

Overall, from the material presented in this portion of the document, it appears that EFPAG is determined to prepare a highly complex automated program while the community of emission factors users (agencies, regulated community, consultants) simply want readily accessible emission factor data that has been screened for quality.

Section 3.4 Providing Guidance Regarding the Use of Emission Factors for Purposes Other than Emission Inventories Any actions that go beyond the compilation, screening, and characterization of the data (basic and/or statistical) have a direct and significant impact on regulatory applicability and permit fees. Accordingly, any of these proposed changes must be subject to formal rule making procedures. Considering that regulated sources are paying hundreds of millions of dollars in permit fees and that regulatory applicability can change the economic viability of entire industrial categories, EPA can no longer hide behind the thread-bare claim that emission factors are simply non-binding guidance. Those days ended more than fifteen years ago with the promulgation of the Clean Air Amendments of 1990. Any options beyond measured actions similar to those described in Option 4.1 are highly inappropriate.

Section 5.3 Understanding the Impact of Uncertainty on the Application of Emissions Factors to Achieve Various Program Objectives - "Preliminary results" provided in Section 5.3 indicate that "... more than half (i.e. the majority) of all source test data points obtained will be less than the mean value. As a result, emissions factors developed based upon the source test data will tend to underestimate the mean value." In fact, they should. EPA has historically used the mean value inappropriately as a measure of the central tendency of the distribution of emission factor test results. Basic statistics indicates that the mean is highly vulnerable to the most extreme values. When a distribution of data is screened to identify outliers or clearly non-representative values, most of these values can be set aside. However, EPA does not appear to implement any basic screening program to identify outliers and other inappropriate data. Accordingly, the mean value presented as the emission factor often depends on a very small number of tests that have the highest emission rate. These mean emission factor values substantially overestimate the values of the majority of emission factor data in the population. The median value is a much better indicator of central tendency because one test value, or a small number of test values cannot exert a large impact on the emission factor value.