

PAMSGRAM

PLEASE DELIVER TO ALL RECIPIENTS IN YOUR OFFICE

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The PAMSGRAM is a FAXED notice for State and Local air pollution control agencies which highlights issues meriting attention by PAMS monitoring staff.

National Performance Audit Program (NPAP) PAMS Program Changes for 1998

Since the EPA, Office of Research and Development (ORD) has divested itself of many Quality Assurance (QA) activities, responsibility for the management of the NPAP has been transferred to Office of Air Quality Planning and Standards (OAQPS). The current NPAP Project Officer requested technical and administrative suggestions from the PAMS QA Work Group (QAWG) for improvements to the PAMS NPAP. As a result, the PAMS QAWG has compiled a list of changes for the VOC and carbonyl program. The focus is currently placed on VOC audits due to concerns over administration of this program and participant feedback. The NPAP carbonyl program will be reviewed and suggestions for changes made at a later date. Some of the changes implemented for the VOC program will naturally make sense for the carbonyl program and those changes will be implemented concurrently. It is important that NPAP VOC audit participants be aware of the changes planned for the program. The expedited reporting of results is especially important as it requires quicker response from participants.

The changes to the program are:

- **Requirement for humidification of audit samples.**
- **Distribute the first NPAP audit well before the season starts.**
- **Expedite results to participants to allow for quick corrective action.**
- **Provide electronic results for ease of data handling and expedition of results.**
- **Report total NMOC and PAMSHC values and acceptance criteria.**
- **Provide a qualitative list of other non-target compounds contained in the cylinder.**
- **Provide a summary report of the overall program results from all participants at the end of each season.**
- **Review and revise the acceptance criteria established previously established in 1994.**
- **Use of SUMMA® or Silcosteel canisters.**

Some changes are difficult to make in time for the 1998 audit season; therefore, we have focused on those actions that can be implemented without major changes to the NPAP Standard Operating Procedures (SOPs) and protocols used for the program. More significant changes will be implemented for the 1999 season. All changes listed here are planned for implementation in the 1998 season except for the use of SUMMA or Silcosteel canisters.

Carbonyl sampling has been problematic; subsequently field audit procedures are necessary for verification that

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sampling is working properly. Issues with carbonyl sampling procedures warrant the development of additional QA and field audit procedures. A Xontech carbonyl sampler was made available to the NPAP contractor to determine feasibility of providing a carbonyl sampler flow audit in the field as part of NPAP. This evaluation is currently in progress.

The following is a summary of changes to the VOC program along with a brief explanation of the need or rationale. These items are not in order of priority.

Requirement for humidification of audit samples. Participants are now required to humidify audit gas. Humidified audits challenge the analytical system with a sample that more closely reflects ambient air. Instructions for humidification are included in each package mailed to participants for the audit.

Distribute the first NPAP audit well before the season starts. Information on system performance is critical to the start up of the PAMS. **The first audit for the 1998 season is tentatively scheduled for April 15**, with subsequent audits tentatively scheduled for June 15 and August 15.

Expedited reporting of results to participants to allow for quick corrective action. Expediting audit results hinges on both the participant and the auditor. Participants must return the results and audit cylinders within the prescribed time frame in order to expedite results. The participant results will no longer be held until all participants results and cylinders are received. Results will be distributed on an individual basis to expedite results; therefore, participants who report their data **and** return their cylinders quickly will receive their results quickly. The following is the basic flow of information:

- Auditor provides a tentative schedule to participants
- Auditor notifies the participants of shipment date
- Cylinder is shipped with instructions and necessary reporting information
- Participant results are due 2 weeks from the date of receipt
- Results will be mailed or faxed to auditor
- Cylinder must be returned immediately for post-audit analysis
- Post-audit analysis is performed
- Results distributed to participants and EPA Regional point of contact via fax or mail
- Participant notified if data outside acceptance criteria; Regional lab will also be notified
- Auditor requests explanation, resolution, and report of corrective action to the EPA NPAP Project Officer
- Results received late will be accepted and included in the data base and annual summary report.

Provide electronic results for ease of data handling and expedition of results. A preliminary E-mail of the data, with hard copy follow up at a later date, helps the states and regions more easily compile their data base and use the data for historical information regarding the site operation and performance. Electronic transfer will also help to increase data turn-around-time. The NPAP contractor is currently determining feasibility of electronic transfer. Electronic transfer will likely not be available until the 1999 season.

Report total NMOC and PAMSHC values and acceptance criteria. PAMSHC (AIRS code 43000) and total NMOC (43102) will be reported as results for NPAP. The criteria for PAMSHC (the sum of PAMS target analytes) would be the same as that used for the individual target compounds. No criteria would be specified for total NMOC. However, an indication of the use of Nafion or other sample drying schemes, or description of the analytical method would be included on the result form to help participants account for differences due to the reporting of polar/oxygenated compounds. Corrective action will not be required for these two components.

Provide a qualitative list of other non-target compounds contained in the cylinder. Information regarding the identification of other non-target compounds present in the audit cylinder allows resolution of peak

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identification errors. As participants are characterizing their analytical system operation and performance, questions regarding peak identification errors may be resolved with this additional audit information. Quantitation of the non-target peaks will not be performed.

Provide a summary report of the overall program results from all participants at the end of each season.

It is important for participants to know how they compare with other sites. This will help each participant understand the significance of their lab's performance on a wider scope. This will also help identify any potential problems with the audit sample if several labs have the same problem with a particular compound. Starting in FY98, an NPAP data summary report will be released and includes all criteria pollutants and the VOC and carbonyl data. It is planned for distribution in late April of 1998. Participant anonymity will be maintained.

In addition, a post-audit rolled-up summary of the same information will be provided to the participants. This report will be the short form of the above information and will only provide data for all labs combined. Individual lab results will not be provided in the post-audit report.

Review and revise the VOC acceptance criteria established in 1994. The acceptance criteria was established in 1994. The QAWG has agreed to revise the audit acceptance criteria. The QAWG is currently evaluating NPAP results from 95-97 for an appraisal of this criteria. Due to limitations of the analytical instrumentation, the data may indicate a need to broaden the acceptance criteria window for specific pollutants. A final acceptance criteria will be provided by the QAWG.

Use SUMMA or Silcosteel canisters for ease of use, faster analytical turn around time, and better compound stability and recovery. Intermittent stability and background problems have been identified and related to the use of treated aluminum cylinders. Stability issues were related to a specific batch of cylinders which have been either removed or re-treated for the program. Humidified canisters would provide an audit that does not require any additional preparation for analysis and is more representative of the system under evaluation. Eliminating the need for transfer and humidification of the audit gas would reduce the potential for greater error. In the short term, aluminum cylinders will continue to be used for the 1998 season until procedures and logistics are in place for 1999.

It is expected that implementation of a canister-based program will require participants to provide clean canisters for use. The NPAP does not own canisters, a canister cleaning system, nor the funds to purchase canisters for this effort. Significant changes to the NPAP VOC SOPs will be required for the contractor to implement the necessary procedural changes to use canisters. Another issue of concern is the logistics of coordinating and managing the request, receipt, and verification of clean canisters provided by participants.

Note to the Reader: Please forward your e-mail address to gerald.nash@epa.gov; future editions of the PAMSGRAM can then be sent to you in electronic format insofar as possible.