

U.S. ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 58

[AD-FRL- ]

RIN 2060-AF71

Ambient Air Quality Surveillance for Lead

AGENCY: Environmental Protection Agency (EPA).

ACTION: Final Rule.

SUMMARY: Lead air pollution levels measured near the Nation's roadways have decreased 97 percent between 1978 and 1997 with the elimination of lead in gasoline used by on-road mobile sources. Because of this historic decrease, EPA is reducing its requirements for measuring lead air pollutant concentrations near major highways, while retaining its focus on point sources and their impact on neighboring populations. The EPA published a direct final rule for ambient air quality surveillance for lead on November 5, 1997 (62FR59813). Due to adverse comments received, the rule was withdrawn on December 23, 1997 (62FR67009). Based on comments that were received, today's action revises 40 CFR part 58 lead air monitoring regulations to allow many lead monitoring stations to be discontinued while maintaining a core lead monitoring network in urban areas to track continued compliance with the lead National Ambient Air Quality Standards (NAAQS). This action does not diminish existing requirements for lead ambient air monitoring around lead point sources. Approximately 70 of the National Air Monitoring Stations (NAMS) and a number of the State and Local Air Monitoring Stations (SLAMS) could be discontinued with this action, thus making more resources available to those State and local agencies to deploy lead air quality monitors around heretofore unmonitored lead point sources. Affected industries include primary and secondary lead smelting, lead battery recycling, and primary copper smelting.

**DATES:** The effective date of this rule is **[insert date 30 days after date of publication in the Federal Register]**.

**ADDRESSES:** All comments relative to this rule have been placed in Docket No. A-91-22, located in the Air Docket (LE-131), US Environmental Protection Agency, 401 M Street, SW, Washington, DC 20460. The docket may be inspected between 8 a.m. and 5:30 p.m., Monday through Friday, excluding legal holidays. A reasonable fee may be charged for copying.

**FOR FURTHER INFORMATION CONTACT:** For general information, contact Brenda Millar, Emissions, Monitoring, and Analysis Division (MD-14), Office of Air Quality Planning and Standards, U.S. Environmental Protection Agency, Research Triangle Park, North Carolina 27711, Telephone: (919) 541-4036, e-mail: millar.brenda@epa.gov. For technical information, contact Michael Jones, Emissions Monitoring, and Analysis Division (MD-14), Office of Air Quality Planning and Standards, U.S. Environmental Protection Agency, Research Triangle Park, North Carolina 27711, Telephone: (919) 541-0528, e-mail: jones.mike@epa.gov.

**SUPPLEMENTARY INFORMATION:**

## **I. AUTHORITY**

Sections 110, 301(a), and 319 of the Clean Air Act as amended 42 U.S.C. 7410, 7601(a), 7619.

## **II. BACKGROUND**

The current ambient air monitoring regulations that pertain to lead air sampling were written in the 1970's when lead emissions from on-road mobile sources (e.g., automobiles, trucks) were the predominant lead air emission source affecting our communities. As such, the current lead monitoring requirements focus primarily upon the idea of determining the air quality impacts from major roadways and urban traffic arterial highways. Since the 1970's, lead has been removed from gasoline sources for on-road vehicles (on-road vehicles now account for less than 1 percent of total lead emissions), and a 97 percent decrease in lead air pollution levels measured in our neighborhoods and near roadways has occurred nationwide.

Because of this historic decrease, EPA is reducing its requirements for measuring lead air pollutant concentrations near major highways, while retaining its focus on point sources and their impacts on neighboring populations.

Several commenters observed that the rule's assessment of on-road vehicles emissions is contrary to the Agency's own figures. Specifically, the proposed rule stated that on-road vehicle emissions account for less than 1 percent of total lead emissions, while the Agency's 1995 National Air Quality and Emissions Trends Report (EPA 454/R-96-005) indicated that nearly 28 percent of total air lead emissions were attributable to on-road vehicles.

Based on the emissions reported in "Locating and Estimating Air Emissions from Sources of Lead and Lead Compounds" (Eastern Research Group, Draft Report, July 1996), on-road vehicle emissions had been over estimated. The EPA investigated this inconsistency and found due cause to revise on-road vehicle emissions estimates. These revisions are reflected in subsequent Agency reports (e.g., EPA 454/R-97-011, "National Air Pollutant Emission Trends, 1900-1996", EPA 454/R-97013, "National Air Quality and Trends Report, 1996," and EPA 454/R-98-016, "National Air Quality and Trends Report, 1997") wherein on-road vehicle emissions are listed as contributing approximately 0.5 percent of the total lead estimate.

Several commenters questioned the rule's asserted need for additional monitors around stationary point sources, particularly the basis for increased scrutiny of stationary sources emitting five or more tons per year, as well as, in select cases, those sources emitting less than 5 tons per year. Further, the potential for increased information collection burden, and means of determining which "smaller stationary sources" would be considered "problematic" were also questioned.

The primary objective of this rule is to reduce the requirement for lead air pollutant concentration measurements near major highways, while maintaining a focus on lead point sources and their impact on neighboring populations. The EPA has determined that, in the interest of furthering attainment of the National Ambient Air Quality Standard (NAAQS) for lead, it is prudent for State and local agencies to deploy these additional lead monitoring resources in the vicinity of any previously unmonitored point source which they feel may have the potential to cause lead air quality violations. A point source is defined in 40 CFR part 51.100(k)(2) as “For lead or lead compounds measured as lead, any stationary source that actually emits a total of 4.5 metric tons (5 tons) per year or more.” Though the verbiage “... although smaller stationary sources may also be problematic depending upon the facility’s size and proximity to neighborhoods” was removed from this rule, State and local agencies are not precluded from further evaluating any lead source which they feel may have the potential to violate lead air quality standards. Suggested guidelines for such source evaluations are described in “Screening Procedures for Estimating the Air Quality Impact of Stationary Sources, Revised” (EPA 454/R-92-019). Finally, ambient lead monitoring occurs at existing major primary and secondary lead smelters, lead acid battery plants, and primary copper smelters. As essentially all quantifiable lead point sources are included in these categories, and considering the substantial decrease in roadside monitoring which will result from this rule, EPA believes this rule will entail little or no increased information collection burden.

A State requested that EPA amend the referenced rule to delete the requirement for one NAMS population-oriented site in the vicinity of a specific facility within their jurisdiction.

The monitoring site north of the facility in question has reported lead NAAQS violations in 1 or 2 quarters during each of the past 3 years. Given that this monitor is sited at the middle scale, it is not unreasonable to require a NAMS site on the neighborhood scale. Data from such a site are useful in representing typical air quality values for nearby residential areas, and suitable for population exposure and trends analysis.

The current lead air monitoring regulations require that each urbanized area with a population of 500,000 or more operate at least two lead NAMS, one of which must be a roadway-oriented site and the second must be a neighborhood site with nearby traffic arteries or other major roadways. There are approximately 58 NAMS in operation and reporting data for 1998. This action would change this NAMS requirement to include one NAMS site in one of the two largest Metropolitan Statistical Areas (MSA/CMSA) within each of the ten EPA Regions, and one NAMS population-oriented site in each populated area (either a MSA/CMSA, town, or county) where lead violations have been measured over the most recent 8 calendar quarters. This latter requirement is designed to provide information to citizens living in areas that have one or more lead point sources that are causing recent air quality violations. At present, the MSA/CMSAs, cities, or counties that have one or more quarterly Pb NAAQS violations that may be subject to this requirement are listed in Table 1.

**Table 1. CMSA/MSA's or Counties with One or More Lead NAAQS Violations  
in 1996-1997**

<b>CMSA/MSA or County</b>	<b>Contributing Lead Source(s)</b>
Philadelphia-Wilmington-Atlantic City CMSA	Franklin Smelter in Philadelphia County, PA
Tampa-St. Petersburg-Clearwater MSA	Gulf Coast Lead in Hillsborough County, FL
Memphis MSA	Refined Metals in Shelby County, TN
Nashville MSA	General Smelting in Williamson County, TN
St. Louis MSA	Chemetco in Madison County, IL, and Doe Run in Jefferson County, MO
Cleveland-Akron CMSA	Master Metals in Cuyahoga County, OH
Iron County, MO	ASARCO in/near Hogan, MO
Omaha MSA	ASARCO in Douglas County, NE
Lewis and Clark County, MT	ASARCO in/near East Helena, MT

Data from these NAMS will be used to assess national trends in lead ambient air pollution.

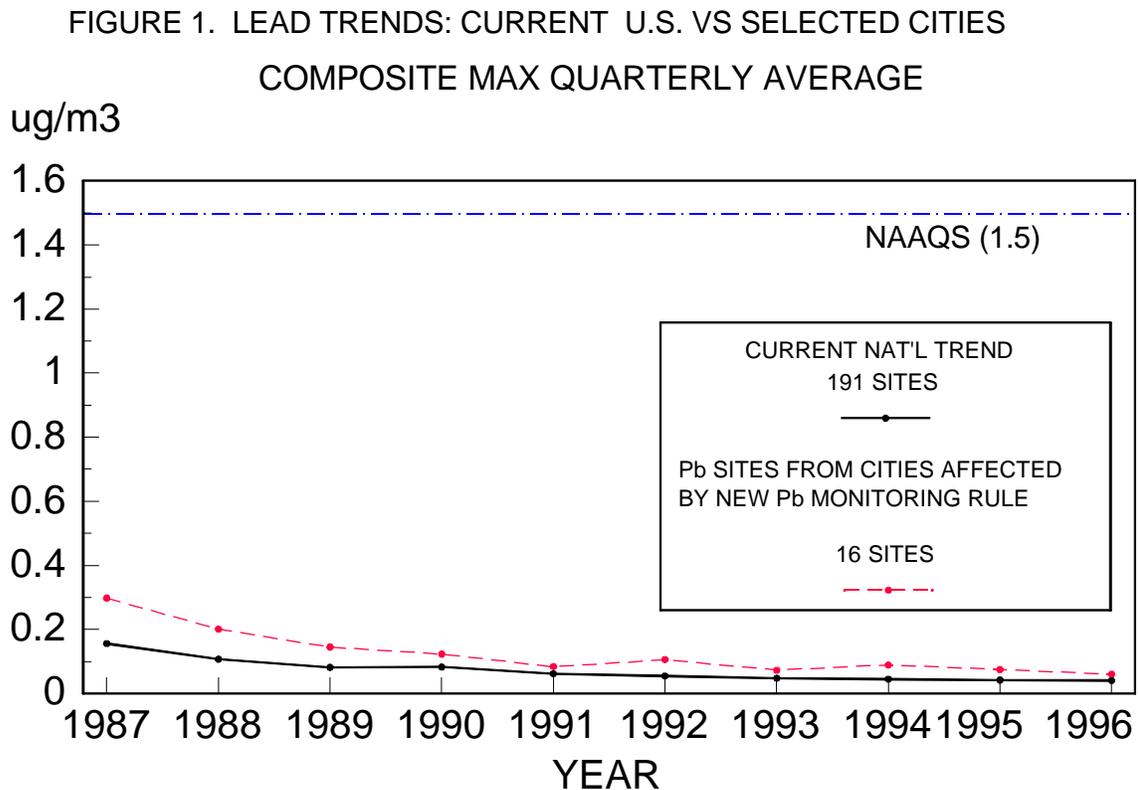


Figure 1 demonstrates the effect that these monitoring reductions will have on our national lead air pollutant trends. For other monitoring within the SLAMS network, EPA is allowing State and local agencies to further focus their efforts toward establishing air monitoring networks around lead point sources which are causing or have a potential to cause exceedances of the quarterly lead NAAQS. Many of these sources have been identified through EPA's ongoing Lead NAAQS Attainment Strategy, and monitoring has already been established. All point sources (stationary sources emitting five or more tons per year) are considered to be candidates for additional lead monitoring. The EPA recommends a minimum of two sites per source, one located for stack emission impacts and the other for fugitive emission impacts. Variations of this two-site network are expected as source type, topography, locations

of neighboring populations, and other factors play a role in how to most appropriately design such a network. EPA guidance for lead monitoring around point sources has been developed and is available through a variety of sources including the National Technical Information Service (800-553-6847), and electronic forms accessible through EPA's Office of Air Quality Planning & Standards Technology Transfer Network, Ambient Monitoring Technology Information Center (AMTIC) bulletin board system at <http://ttnwww.rtpnc.epa.gov>.

One commenter questioned the rule's consistency with statutory mandates under section 319 of the Clean Air Act (CAA), in particular by citing the requirement for "uniform air quality criteria... throughout the United States." 42 U.S.C. Section 7619.

In section 319 of the CAA, the term "criteria" refers to a specific set of pollutants and the associated levels and forms of their respective standards. The term "uniform" refers to both criteria and measurement methodology, relative to a specific air quality index. Uniformity in ambient monitoring is achieved by monitor design specifications (40 CFR part 53) and quality assurance/quality control procedures. Monitors which meet such design specifications are designated as either Federal Reference Method (FRM) or Federal Equivalent Method (FEM), as appropriate. Further, upon reading the entire text of the CAA, section 319, from which the commenter's excerpt was taken, it becomes clear that the new rule is, in fact, consistent with the referenced statutory mandates.

Several commenters noted that this rule is being issued in response to numerous State and local agency requests, yet the docket contains no documentation of such requests.

As many roadside monitored ambient lead values have steadily declined to at or near minimally detectable levels, the need for continued roadside ambient lead monitoring has been increasingly and repeatedly questioned by State representatives at the biannual Standing Air Monitoring Work Group meetings, as well as several instances of written queries and requests. The reason the Agency did not include any such existing documentation in the docket is that the basis for this rule revision is not requests

from State and local agencies, but rather EPA's success in essentially eliminating on-road mobile source lead emissions. Given the fact that on-road mobile sources' contribution to the total lead emissions estimate is negligible, as evidenced by minimally detectable ambient levels at all locations other than sites in proximity to lead point sources, it is EPA's inherent responsibility to ensure our nation's ambient air pollution monitoring resources are redirected toward environmental issues of concern.

Several commenters expressed concern over potential data misuse in commencement of unjustified enforcement proceedings or citizen suits. The reason for concern was cited as the combined impact of the proposed revisions to 40 CFR part 58 and EPA's Credible Evidence revisions to 40 CFR parts 51, 52, 60, and 61.

The referenced Credible Evidence revisions and related amendments to 40 CFR part 64, Compliance Assurance Monitoring, pertain exclusively to emissions monitoring data, not ambient air quality data. The proposed revisions to 40 CFR part 58, Ambient Air Quality Surveillance, do not allow for use of non-reference data in any compliance or enforcement actions. There is, therefore, no plausible potential for data misuse in commencement of unjustified enforcement proceedings or citizen suits.

In addition to the changes to the lead monitoring requirements, EPA is making several minor changes to update and correct regulatory provisions to current practices.

Specifically this affects §§ 58.31, 58.34, 58.41, Appendix B, Appendix D Sections 3.2 and 3.3, and Appendix G, Sections 1 and 2b.

### **III. Administrative Requirements**

#### **A. Executive Order 12866**

Under Executive Order 12866 (58 F.R. 51735, October 4, 1993), the Agency must determine whether the regulatory action is "significant" and therefore subject to Office of Management and Budget (OMB) review and to the requirements of the Executive Order. The Order defines "significant regulatory action" as one that is likely to result in a rule that may:

(1) Have an annual effect on the economy of \$100 million or more or adversely affect in a material way the economy, a sector of the economy, productivity, competition, jobs, the environment, public health or safety, or State, local, or governments or communities;

(2) Create a serious inconsistency or otherwise interfere with an action taken or planned by another Agency;

(3) Materially alter the budgetary impact of entitlements, grants, user fees, or loan programs or the rights and obligations or recipients thereof; or

(4) Raise novel legal or policy issues arising out of legal mandates, the President's priorities, or the principles set forth in the Executive Order.

It has been determined that this action is not a "significant regulatory action" under the terms of the Executive Order 12866 and is therefore not subject to formal OMB review.

#### B. Paperwork Reduction Act

Today's action does not impose any new information collection burden. This action revises the part 58 air monitoring regulations for lead to allow many monitoring sites to be discontinued. The Office of Management and Budget (OMB) has previously approved the information collection requirements in the part 58 regulation under the provisions of the Paperwork Reduction Act, 44 U.S.C. 3501 et seq. and has assigned OMB control number 2060-0084 (EPA ICR No. 0940.13 and revised by 0940.14).

#### C. Executive Order 12875 Enhancing the Intergovernmental Partnership

Under Executive Order 12875, EPA may not issue a regulation that is not required by statute and that creates a mandate upon a State, local or tribal government, unless the Federal government provides the funds necessary to pay the direct compliance costs incurred by those governments, or EPA consults with those governments. If EPA complies by consulting, Executive Order 12875 requires EPA to provide to the Office of Management and Budget a description of the extent of EPA's prior consultation with representatives of affected State, local and tribal governments, the nature of their concerns, copies of any

written communications from the governments, and a statement supporting the need to issue the regulation. In addition, Executive Order 12875 requires EPA to develop an effective process permitting elected officials and other representatives of State, local and tribal governments “to provide meaningful and timely input in the development of regulatory proposals containing significant unfunded mandates.”

Today’s rule implements requirements specifically set forth by the Congress in 42 U.S.C. 7410 without the exercise of any discretion by EPA. Accordingly, the requirements of section 1(a) of Executive Order 12875 do not apply to this rule.

#### D. Executive Order 13045

Executive Order 13045, entitled “Protection of Children from Environmental Health Risks and Safety Risks” (62 FR 19885, April 23, 1997), applies to any rule that the EPA determines (1) is “economically significant,@as defined under Executive Order 12866, and (2) the environmental health or safety risk addressed by the rule has a disproportionate effect on children. If the regulatory action meets both criteria, the Agency must evaluate the environmental health or safety effects of the planned rule on children and explain why the planned regulation is preferable to other potentially effective and reasonably feasible alternatives considered by the Agency.

This rule is not subject to Executive Order 13045 because it is not an economically significant regulatory action as defined by Executive Order 12866, and it does not address an environmental health or safety risk that would have a disproportionate effect on children.

#### E. Executive Order 13084 Consultation and Coordination with Indian Tribal Governments

Under Executive Order 13084, EPA may not issue a regulation that is not required by statute, that significantly or uniquely affects the communities of Indian tribal governments, and that imposes substantial direct compliance costs on those communities, unless the Federal government provides the funds necessary to pay the direct compliance costs incurred by the tribal governments, or EPA consults with those governments. If EPA complies by consulting, Executive Order 13084 requires EPA to provide to the

Office of Management and Budget, in a separately identified section of the preamble to the rule, a description of the extent of EPA's prior consultation with representatives of affected tribal governments, a summary of the nature of their concerns, and a statement supporting the need to issue the regulation. In addition, Executive Order 13084 requires EPA to develop an effective process permitting elected officials and other representatives of Indian tribal governments "to provide meaningful and timely input in the development of regulatory policies on matters that significantly or uniquely affect their communities."

Today's rule does not significantly or uniquely affect the communities of Indian tribal governments. Accordingly, the requirements of section 3(b) of Executive Order 13084 do not apply to this rule.

#### F. Impact on Small Entities

The Regulatory Flexibility Act (RFA) generally requires an agency to conduct a regulatory flexibility analysis of any rule subject to notice and comment rulemaking requirements unless the agency certifies that the rule will not have a significant economic impact on a substantial number of small entities. Small entities include small businesses, small not-for-profit enterprises, and small governmental jurisdictions whose jurisdictions are less than 50,000 people. This rule will not have a significant impact on a substantial number of small entities because it does not impact small entities whose jurisdictions cover less than 50,000 people. Pursuant to the provision of 5 U.S.C. 605(b), I certify that this action will not have a significant economic impact on a substantial number of small entities.

Since this modification is classified as minor, no additional reviews are required.

#### G. Unfunded Mandates Reform Act of 1995

Under section 202 of the Unfunded Mandates Reform Act of 1995 ("Unfunded Mandates Act"), signed into law on March 22, 1995, EPA must prepare a budgetary impact statement to accompany any proposed or final standards that include a Federal mandate that may result in estimated costs to State, local, or tribal governments, or to the private sector, of, in the aggregate, \$100 million or more. Under section 205, the EPA must select the

most cost-effective and least burdensome alternative that achieves the objectives of the standard and is consistent with statutory requirements. Section 203 requires EPA to establish a plan for informing and advising any small governments that may be significantly or uniquely impacted by the standards. The EPA has determined that this action does not include a Federal mandate that may result in estimated costs of \$100 million or more to either State, local, or tribal governments. Therefore, the requirements of the Unfunded Mandates Act of 1995 do not apply to this action.

#### H. National Technology Transfer and Advancement Act

Section 12(d) of the National Technology Transfer and Advancement Act of 1995 (NTTAA), Pub L. No. 104-113, 12(d) (15 U.S.C. 272 note) directs EPA to use voluntary consensus standards in its regulatory activities unless to do so would be inconsistent with applicable law or otherwise impractical. Voluntary consensus standards are technical standards (e.g., materials specifications, test methods, sampling procedures, and business practices) that are developed or adopted by voluntary consensus standards bodies. The NTTAA directs EPA to provide Congress, through OMB, explanations when the Agency decides not to use available and applicable voluntary consensus standards.

This action does not involved technical standards. Therefore, EPA did not consider the use of any voluntary consensus standards.

#### I. Submission to Congress and the General Accounting Office

The Congressional Review Act, U.S.C. section 801 et seq., as added by the Small Business Regulatory Enforcement Fairness Act of 1996, generally provides that before a rule may take effect, the Agency promulgating the rule must submit a rule report, which includes a copy of the rule to each House of the Congress and to the Comptroller General of the United States. EPA will submit a report containing this rule and other required information to the U.S. Senate, the U.S. House of Representatives, and the Comptroller General of the United States prior to publication of the rule in the Federal Register. This rule is not a “major rule” as defined by 5 U.S.C. section 804(2).

**AMBIENT AIR QUALITY SURVEILLANCE FOR LEAD, PAGE 17 OF 29**

List of Subjects in 40 CFR Part 58

Air pollution control, Intergovernmental relations, Reporting and record keeping requirements, Quality assurance requirements, Ambient air quality monitoring network.

\_\_\_\_\_

Date

\_\_\_\_\_

Administrator

Billing Code: 6560-50-P

For the reasons set forth in the preamble, title 40, chapter I, part 58 of the Code of Federal Regulations is amended as follows:

**PART 58 -- [AMENDED]**

1. The authority citation for part 58 continues to read as follows:

Authority: 42 U.S.C. 7410, 7601(a), 7613, 7619.

2. Section 58.31(a) is revised to read as follows:

**§58.31 NAMS network description.**

\* \* \* \* \*

- (a) The AIRS site identification number for existing stations.

\* \* \* \* \*

3. Section 58.34(a) is revised to read as follows:

**§58.34 NAMS network completion.**

(a) Each NAMS must be in operation, be sited in accordance with the criteria in Appendix E to this part, and be located as described in the AIRS database; and

\* \* \* \* \*

4. Section 58.41(b) is revised to read as follows:

**§58.41 PAMS network description.**

\* \* \* \* \*

- (b) The AIRS site identification number for existing stations.

\* \* \* \* \*

5. Appendix D is amended by revising the first sentence of paragraph 3 of section 1, revising section 2.7, revising the fifth paragraph of section 3, revising the last sentence of the first paragraph of section 3.2, revising the last sentence of the first paragraph of section 3.3, revising section 3.6, and revising references 6, 7, 10 of section 6 and adding reference 19 to section 6 to read as follows:

**Appendix D--Network Design for State and Local Air Monitoring Stations (SLAMS), National Air Monitoring Stations (NAMS), and Photochemical Assessment Monitoring Stations (PAMS)**

\* \* \* \* \*

1. SLAMS Monitoring Objectives and Spatial Scales

\*\*\*\*\*

It should be noted that this appendix contains no criteria for determining the total number of stations in SLAMS networks, except in areas where Pb concentrations currently exceed or have exceeded the Pb NAAQS during any one quarter of the most recent eight quarters. \* \* \*

\* \* \* \* \*

2.7 Lead (Pb) Design Criteria for SLAMS. Presently, less than 1 percent of the Nation's Pb air pollution emissions originate from on-road mobile source exhaust. The majority of Pb emissions come from point sources, such as metals processing facilities, waste disposal and recycling, and fuel combustion (reference 19 of this appendix). The SLAMS networks are used to assess the air quality impacts of Pb point sources, and to determine the broad population exposure from any Pb source. The most important spatial scales to effectively characterize the emissions from point sources are the micro, middle, and neighborhood scales. For purposes of establishing monitoring stations to represent large homogeneous areas other than the above scales of representativeness, urban or regional scale stations may also be needed.

Microscale--This scale would typify areas in close proximity to lead point sources. Emissions from point sources such as primary and secondary lead smelters, and primary copper smelters may under fumigation conditions likewise result in high ground level concentrations at the microscale. In the latter case, the microscale would represent an area impacted by the plume with dimensions extending up to approximately 100 meters. Data collected at microscale stations provide information for evaluating and developing "hot-spot" control measures.

Middle Scale--This scale generally represents Pb air quality levels in areas up to several city blocks in size with dimensions on the order of approximately 100 meters to 500 meters. The middle scale may for example, include schools and playgrounds in center city areas which are close to major Pb point sources. Pb monitors in such areas are desirable because of the higher sensitivity of children to exposures of elevated Pb concentrations (reference 7 of this appendix). Emissions from point sources frequently impact on areas at which single sites may be located to measure concentrations representing middle spatial scales.

Neighborhood Scale--The neighborhood scale would characterize air quality conditions throughout some relatively uniform land use areas with dimensions in the 0.5 to 4.0 kilometer range. Stations of this scale would provide monitoring data in areas representing conditions where children live and play. Monitoring in such areas is important since this segment of the population is more susceptible to the effects of Pb. Where a neighborhood site is located away from immediate Pb sources, the site may be very useful in representing typical air quality values for a larger residential area, and therefore suitable for population exposure and trends analyses.

Urban Scale--Such stations would be used to present ambient Pb concentrations over an entire metropolitan area with dimensions in the 4 to 50 kilometer range. An urban scale station would be useful for assessing trends in citywide air quality and the effectiveness of larger scale air pollution control strategies.

Regional Scale--Measurements from these stations would characterize air quality levels over areas having dimensions of 50 to hundreds of kilometers. This large scale of representativeness, rarely used in Pb monitoring, would be most applicable to sparsely populated areas and could provide information on background air quality and inter-regional pollutant transport.

Monitoring for ambient Pb levels is required for all major urbanized areas where Pb levels have been shown or are expected to be of concern due to the proximity of Pb point source emissions. Sources emitting five tons per year or more of actual point and fugitive Pb emissions would generally

be candidates for lead ambient air monitoring. Modeling may be needed to determine if a source has the potential to exceed the quarterly lead National Ambient Air Quality Standards (NAAQS). The total number and type of stations for SLAMS are not prescribed but must be determined on a case-by-case basis. As a minimum, there must be two stations in any area where Pb concentrations currently exceed or have exceeded Pb NAAQS during any one quarter of the most recent eight quarters. Where the Pb air quality violations are widespread or the emissions density, topography, or population locations are complex and varied, there may be a need to establish more than two Pb ambient air monitoring stations. The EPA Regional Administrator may specify more than two monitoring stations if it is found that two stations are insufficient to adequately determine if the Pb standard is being attained and maintained. The Regional Administrator may also specify that stations be located in areas outside the boundaries of the urbanized areas.

Concerning the previously discussed required minimum of two stations, at least one of the stations must be a category (a) type station and the second may be either category (a) or (b) depending upon the extent of the point source's impact and the existence of residential neighborhoods surrounding the source. When the source is located in an area that is subject to NAMS requirements as in Section 3 of this Appendix, it is preferred that the NAMS site be used to describe the population's exposure and the second SLAMS site be used as a category (a) site. Both of these categories of stations are defined in section 3.

To locate monitoring stations, it will be necessary to obtain background information such as point source emissions inventories, climatological summaries, and local geographical characteristics. Such information should be used to identify areas that are most suitable to the particular monitoring objective and spatial scale of representativeness desired. References 9 & 10 of this appendix provide additional guidance on locating sites to meet specific urban area monitoring objectives and should be used in locating new stations or evaluating the adequacy of existing stations.

After locating each Pb station and, to the extent practicable, taking into consideration the collective impact of all Pb sources and surrounding physical characteristics of the siting area, a spatial scale of representativeness must be assigned to each station.

\* \* \* \* \*

### 3. Network Design for National Air Monitoring Stations (NAMS)

\* \* \* \* \*

For each urban area where NAMS are required, both categories of monitoring stations must be established. In the case of Pb and SO<sub>2</sub> if only one NAMS is needed, then category (a) must be used. The analysis and interpretation of data from NAMS should consider the distinction between these types of stations as appropriate.

\* \* \* \* \*

#### 3.2 Sulfur Dioxide Design Criteria for NAMS

\* \* \*

The actual number and location of the NAMS must be determined by EPA Regional Offices and the State Agency, subject to the approval of EPA Headquarters, Office of Air Quality Planning and Standards (OAQPS).

\* \* \* \* \*

#### 3.3 Carbon Monoxide (CO) Design Criteria for NAMS

\* \* \*

At the national level, EPA will not routinely require data from as many stations as are required for PM-10, and perhaps SO<sub>2</sub>, since CO trend stations are principally needed to assess the overall air quality progress resulting from the emission controls required by the Federal motor vehicle control program (FMVCP) and other local controls.

\* \* \* \* \*

3.6 Lead (Pb) Design Criteria for NAMS. In order to achieve the national monitoring objective, one NAMS site must be located in one of the two cities with the greatest population in the following ten regions of the country (the choice of which of the two metropolitan areas should have the lead NAMS requirement is made by the Administrator or the Administrator's designee using the recommendation of the Regional Administrators or the Regional Administrators' designee):

<b>Table 1. EPA Regions &amp; Two Current Largest MSA/CMSAs (using 1995 Census Data)</b>	
<b>Region (States)</b>	<b>Two Largest MSA/CMSAs</b>
I (Connecticut, Massachusetts, Maine, New Hampshire, Rhode Island, Vermont)	Boston-Worcester-Lawrence CMSA Hartford, CT MSA
II (New Jersey, New York, Puerto Rico, U.S. Virgin Islands)	New York-Northern New Jersey-Long Island, CMSA San Juan-Caguas-Arecibo, PR CMSA
III (Delaware, Maryland, Pennsylvania, Virginia, West Virginia, Washington, D.C.)	Washington-Baltimore CMSA Philadelphia-Wilmington-Atlantic City CMSA
IV (Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee)	Miami-Fort Lauderdale CMSA Atlanta, GA MSA
V (Illinois, Indiana, Michigan, Minnesota, Ohio, Wisconsin)	Chicago-Gary-Kenosha CMSA Detroit-Ann Arbor-Flint CMSA
VI (Arkansas, Louisiana, New Mexico, Oklahoma, Texas)	Dallas-Fort Worth CMSA Houston-Galveston-Brazoria CMSA
VII (Iowa, Kansas, Missouri, Nebraska)	St. Louis MSA Kansas City MSA
VIII (Colorado, Montana, North Dakota, South Dakota, Utah, Wyoming)	Denver-Boulder-Greeley CMSA Salt Lake City-Ogden MSA
IX (American Samoa, Arizona, California, Guam, Hawaii, Nevada)	Los Angeles-Riverside-Orange County CMSA San Francisco-Oakland-San Jose CMSA
X (Alaska, Idaho, Oregon, Washington)	Seattle-Tacoma-Bremerton CMSA Portland-Salem CMSA

In addition, one NAMS site must be located in each of the MSA/CMSAs where one or more violations of the quarterly Pb NAAQS have been recorded over the previous eight quarters. If a

violation of the quarterly Pb NAAQS is measured at a monitoring site outside of a MSA/CMSA, one NAMS site must be located within the county in a populated area, apart from the Pb source, to assess area wide Pb air pollution levels. These NAMS sites should represent the maximum Pb concentrations measured within the MSA/CMSA, city, or county that is not directly affected from a single Pb point source. Further, in order that on-road mobile source emissions may continue to be verified as not contributing to lead NAAQS violations, roadside ambient lead monitors should be considered as viable NAMS site candidates. A NAMS site may be a microscale or middle scale category (a) station, located adjacent to a major roadway (e.g., >30,000 ADT), or a neighborhood scale category (b) station that is located in a highly populated residential section of the MSA/CMSA or county where the traffic density is high. Data from these sites will be used to assess general conditions for large MSA/CMSAs and other populated areas as a marker for national trends, and to confirm continued attainment of the Pb NAAQS. In some cases, the MSA/CMSA subject to the latter lead NAMS requirement due to a violating point source will be the same MSA/CMSA subject to the lead NAMS requirement based upon its population. For these situations, the total minimum number of required lead NAMS is one.

\*\*\*\*\*

## 6. References

\*\*\*\*\*

6. Lead Guideline Document, U. S. Environmental Protection Agency, Research Triangle Park, NC. EPA-452/R-93-009.

7. Air Quality Criteria for Lead. Office of Research and Development, U.S. Environmental Protection Agency, Washington, DC. EPA-600/8-83-028 aF - dF, 1986, and supplements EPA-600/8-89/049F, August 1990. (NTIS document numbers PB87-142378 and PB91-138420.)

\*\*\*\*\*

10. "Guidance for Conducting Ambient Air Monitoring for Lead Around Point Sources," Office of Air Quality Planning and Standards, U.S. Environmental Protection Agency, Research Triangle Park, NC EPA - 454/R-92-009, May 1997.

\*\*\*\*\*

19. National Air Pollutant Emissions Trends, 1900-1995, Office of Air Quality Planning and Standards, U. S. Environmental Protection Agency, Research Triangle Park, NC. EPA-454/R96-007, October 1996, updated annually.

\*\*\*\*\*

6. Appendix E is amended by revising the first paragraph of section 7.1, adding a sentence at the beginning of section 7.3, revising section 7.4, and revising reference 18 in section 13 to read as follows:

**Appendix E--Probe and Monitoring Path Siting Criteria for Ambient Air Quality Monitoring**

\*\*\*\*\*

7.1 Vertical Placement. Optimal placement of the sampler inlet for Pb monitoring should be at breathing height level. However, practical factors such as prevention of vandalism, security, and safety precautions must also be considered when siting a Pb monitor. Given these considerations, the sampler inlet for microscale Pb monitors must be 2-7 meters above ground level. The lower limit was based on a compromise between ease of servicing the sampler and the desire to avoid unrepresentative conditions due to re-entrainment from dusty surfaces. The upper limit represents a compromise between the desire to have measurements which are most representative of population exposures and a consideration of the practical factors noted above.

\*\*\*\*\*

7.3. Spacing from Roadways. This criteria applies only to those Pb sites designed to assess lead concentrations from mobile sources. Numerous studies have shown that ambient Pb levels near

mobile sources are a function of the traffic volume and are most pronounced at ADT >30,000 within the first 15 meters on the downwind side of the roadways.

\*\*\*\*\*

7.4. Spacing from trees and other considerations. Trees can provide surfaces for deposition or adsorption of Pb particles and obstruct normal wind flow patterns. For microscale and middle scale category (a) sites there must not be any tree(s) between the source of the Pb and the sampler. For neighborhood scale category (b) sites, the sampler should be at least 20 meters from the drip line of trees. The sampler must, however, be placed at least 10 meters from the drip line of trees which could be classified as an obstruction, i.e., the distance between the tree(s) and the sampler is less than the height that the tree protrudes above the sampler.

\*\*\*\*\*

### 13. References

\*\*\*\*\*

18. Air Quality Criteria for Lead. Office of Research and Development, U.S. Environmental Protection Agency, Washington, DC EPA-600/8-83-028 aF - dF, 1986, and supplements EPA-600/8-89/049F, August 1990. (NTIS document numbers PB87-142378 and PB91-138420.)

\*\*\*\*\*

7. Section 1 and section 2 b of Appendix G are revised to read as follows:

### **Appendix G -- Uniform Air Quality Index and Daily Reporting**

\* \* \* \* \*

1. General. This appendix describes the uniform air quality index to be used by States in reporting the daily air quality index required by §58.50.

2. Definitions.

\* \* \* \* \*

b. Reporting Agency means the applicable State agency or a local air pollution control agency designated by the State, that will carry out the provisions of §58.50.

\* \* \* \* \*