with periods of projected NAAQSthreatening pollutant potential, the representativeness of the resulting data record in reflecting maximum pollutant concentrations may be substantially impaired despite the fact that the site may otherwise exhibit an acceptable, even exceedingly high overall valid data capture rate.

In seeking EPA approval for inclusion of a site using an open path analyzer into the formal SLAMS/NAMS or PSD network, monitoring agencies must submit an analysis which evaluates both obscuration potential for a proposed path length for the subject area and the effect this potential is projected to have on the representativeness of the data record. This analysis should include one or more of the following elements, as appropriate for the specific circumstance: climatological information, historical pollutant and aerosol information, modeling analysis results, and any related special study results

## 4.3 Spacing From Roadways

Street canyon and traffic corridor stations (microscale) are intended to provide a measurement of the influence of the immediate source on the pollution exposure of the population. In order to provide some reasonable consistency and comparability in the air quality data from microscale stations, a minimum distance of 2 meters and a maximum distance of 10 meters from the edge of the nearest traffic lane must be maintained for these CO monitoring inlet probes. This should give consistency to the data, yet still allow flexibility of finding suitable locations.

Street canyon/corridor (microscale) inlet probes must be located at least 10 meters from an intersection and preferably at a midblock location. Midblock locations are preferable to intersection locations because intersections represent a much smaller portion of downtown space than do the streets between them. Pedestrian exposure is probably also greater in street canyon/corridors than at intersections. Also, the practical difficulty of positioning sampling inlets is less at midblock locations than at the intersection. However, the final siting of the monitor must meet the objectives and intent of appendix D, sections 2.4, 3, 3.3, and appendix E, section 4.

In determining the minimum separation between a neighborhood scale monitoring station and a specific line source, the presumption is made that measurements should not be substantially influenced by any one roadway. Computations were made to determine the separation distance, and table 2 provides the required minimum separation distance between roadways and a probe or 90 percent of a monitoring path. Probes or monitoring paths that are located closer to roads than this criterion allows should not be classified as a neighborhood scale, since the measurements from such a station would closely represent the middle scale. Therefore, stations not meeting this criterion should be classified as middle scale.

TABLE 2.—MINIMUM SEPARATION DIS-TANCE BETWEEN ROADWAYS AND PROBES OR MONITORING PATHS FOR MONITORING NEIGHBORHOOD SCALE CARBON MONOXIDE

Roadway average daily traffic, vehicles per day	Minimum separation distance <sup>1</sup> for probes or 90% of a monitoring path (meters)
≤10,000	10
15,000	25
20,000	45
30,000	80
40,000	115
50,000	135
≤60,000	150

<sup>1</sup> Distance from the edge of the nearest traffic lane. The distance for intermediate traffic counts should be interpolated from the table values based on the actual traffic count.

4.4 Spacing From Trees and Other Considerations

Since CO is relatively nonreactive, the major factor concerning trees is as obstructions to normal wind flow patterns. For middle and neighborhood scale stations, trees should not be located between the major sources of CO, usually vehicles on a heavily traveled road, and the monitor. The probe or at least 90 percent of the monitoring path must be 10 meters or more from the drip line of trees which are between the probe or the monitoring path and the road and which extend at least 5 meters above the probe or monitoring path. For microscale stations, no trees or shrubs should be located between the probe and the roadway.

4.5 Cumulative Interferences on a Monitoring Path

The cumulative length or portion of a monitoring path that is affected by obstructions, trees, or roadways must not exceed 10 percent of the total monitoring path length.

## 4.6 Maximum Monitoring Path Length

The monitoring path length must not exceed 1 kilometer for analyzers used for neighborhood scale monitoring applications, or 300 meters for middle scale monitoring applications. In areas subject to frequent periods of dust, fog, rain, or snow, consideration should be given to a shortened monitoring path length to minimize loss of monitoring data due to these temporary optical obstructions. For certain ambient air monitoring scenarios using open path analyzers, shorter path lengths may be needed in order to ensure that the monitoring station meets the objectives and spatial scales defined for SLAMS in appendix D. Therefore, the Regional Administrator or the Regional Administrator's designee may require shorter path lengths, as needed on an individual basis, to ensure that the SLAMS meet the appendix D requirements. Likewise, the Administrator or the Administrator's designee may specify the maximum path length used at monitoring stations designated as NAMS or PAMS as needed on an individual basis.

Table 3—Separation Distance Between Pb Stations and Roadways (Edge of Nearest Traffic Lane)

\* \* \* \*

9. Probe Material and Pollutant Sample Residence Time

For the reactive gases,  $SO_2$ ,  $NO_2$ , and O<sub>3</sub>, special probe material must be used for point analyzers. Studies<sup>20-24</sup> have been conducted to determine the suitability of materials such as polypropylene, polyethylene, polyvinyl chloride, Tygon, aluminum, brass, stainless steel, copper, Pyrex glass and Teflon for use as intake sampling lines. Of the above materials, only Pyrex glass and Teflon have been found to be acceptable for use as intake sampling lines for all the reactive gaseous pollutants. Furthermore, the EPA<sup>25</sup> has specified borosilicate glass or FEP Teflon as the only acceptable probe materials for delivering test atmospheres in the determination of reference or equivalent methods. Therefore, borosilicate glass, FEP Teflon, or their equivalent must be used for existing and new NAMS or SLAMS.

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10. Photochemical Assessment Monitoring Stations (PAMS)

10.1 Horizontal and Vertical Placement

The probe or at least 80 percent of the monitoring path must be located 3 to 15