were incorporated into the regulatory text as detailed in this action. Copies of the specific EPA responses to each comment received are available in the docket as noted previously.

III. Discussion of Regulatory Revisions and Major Comments on Proposal

A. Section 58.1 Definitions

Today's action adds several new definitions to part 58 which are needed to clearly define the proposed new requirements for open path analyzers. Definitions for "point analyzer" and 'open path analyzer'' have been added to define these two types of automated instruments and to clarify the distinction between them, since the various new and existing requirements may apply to one or the other or both types of analyzers. A new definition for 'probe'' is added to specify the inlet where an air sample is extracted from the atmosphere for delivery to a sampler or point analyzer. Similarly, a new definition is added for "monitoring path" to describe the path in the atmosphere over which an open path analyzer measures and averages a pollutant concentration. Closely associated with the term "monitoring path" are new definitions for 'monitoring path length," to describe the scalar length of the monitoring path, and "optical measurement path length," to describe the actual length of the optical beam of an open path instrument. The length of the optical beam may be two or more times the length of the monitoring path when one or more mirrors are used to cause the optical beam to pass through the monitoring path more than once. One public comment recommended changes to the language of the two former definitions to clarify the differences between path integrated values and path-averaged concentrations. The EPA concurs with this recommendation and clarifying language has been added.

To help describe the new requirements for data quality assessment procedures, the term "effective concentration" is defined. This term refers to the ambient concentration of a pollutant over the monitoring path that would be equivalent to a much higher concentration of the pollutant contained in a short calibration cell inserted into the optical beam of an open path analyzer during a precision test or accuracy audit. Specifically, effective concentration is defined as the actual concentration of the pollutant in the test cell multiplied by the ratio of the optical measurement path length of the test cell to the optical measurement path length

of the atmospheric monitoring path. Also, when a calibration cell is inserted into the actual atmospheric measurement beam of an open path analyzer for a precision or accuracy test, the resulting measurement reading would be the sum of the pollutant concentration in the calibration cell and the pollutant concentration in the atmosphere. The atmospheric pollutant concentration must be measured separately and subtracted from the test measurement to produce a "corrected concentration," which would be the true test result. Thus, the term "corrected concentration" is defined as the result of such a precision or accuracy assessment test after correction of the test measurement by subtracting the atmospheric pollutant concentration.

Finally, a formal definition of "monitor" is provided to clarify its use in the regulations as a generic term to refer to any type of ambient air analyzer or sampler that is acceptable for use in a SLAMS monitoring network under appendix C of this part. A monitor could thus be a point analyzer, an open path analyzer, or a sampler.

B. Appendix A—Quality Assurance Requirements for SLAMS

Appendix A describes both general quality assurance requirements applicable to SLAMS air monitoring as well as specific procedures for assessing the quality of the monitoring data obtained in SLAMS monitoring networks. While the general quality assurance requirements (in section 2) are directly applicable to open path analyzers without change, the more specific data quality assessment procedures (in section 3) must be modified somewhat to apply to open path analyzers. Accordingly, changes to these procedures are provided to incorporate appropriate data quality assessment tests applicable to open path monitoring instruments. To the extent possible, the new requirements are similar or parallel to the existing requirements for point analyzers.

For both the precision test (section 3.1) and the accuracy audit (section 3.2), the new requirements specify that an optical calibration or test cell containing a pollutant concentration standard must be inserted into the optical measurement beam of the open path analyzer. Both theory and testing indicate that the use of such a calibration or test cell is equivalent in accuracy to measurement of the equivalent pollutant concentration in air over the entire monitoring path of an open path analyzer. Each concentration standard must be selected such that it produces an "effective concentration" equivalent to a specified ambient concentration over the monitoring path. As noted previously, effective concentration is defined as the actual concentration of the pollutant in the test cell multiplied by the ratio of the optical measurement path length of the test cell to the optical measurement path length of the atmospheric monitoring path. The effective concentrations specified for the precision and accuracy tests for open path analyzers are the same as the test concentrations currently specified in these procedures for point analyzers.

Ideally, precision and accuracy assessments should test a monitoring instrument in its normal monitoring configuration. Therefore, the new test procedures require that the test or calibration cell containing the test pollutant concentration standard be inserted into the actual atmospheric measurement beam of the open path analyzer. The resulting test measurement of the pollutant concentration is thus the sum of the test concentration in the cell and the pollutant concentration in the atmosphere, because the measurement beam would pass through both the test cell and the atmospheric monitoring path. Accordingly, a correction for the atmospheric concentration is required to obtain the true test result. In the new procedures, the atmospheric pollutant concentration is measured immediately before and again immediately after the precision or accuracy test, and the average of these two measurements is subtracted from the test concentration measurement to produce a "corrected concentration," which is reported as the test result. One comment was received regarding the former correction procedure which indicated a concern that a second, point analyzer would be needed to complete the accuracy audit and precision check procedures described in the proposal. The accuracy audit and precision check procedures defined in this action do not require the use of a second point analyzer. It is intended that the ambient air concentration measurements needed to correct the test readings would be obtained by the open path analyzer under test. The language of the procedures has been changed to clarify this requirement.

The corrected concentration reported for a precision or accuracy test may not be accurate if the atmospheric pollutant concentration changes during the test. When the ambient concentration is variable, the average of the pre- and post-test measurements may not be an accurate representation of the ambient pollutant concentration during the test.