

D. Data Validation and Usability

D.1 Data Review, Verification, and Validation

If sample data is collected, it will be reported to the Department of Natural Resources. It will be the responsibility of the Facility or Consultant to perform the following activities on the data set and submit the results to the department as a part of the Data Summary Report. Raw data will be submitted, and data revision conducted only as per the approved QAPP.

Discuss or refer to the Consultant or Facility Standard Operating Procedure (SOP) for:

1. *Review sampling system and sample data by following these steps:*
 - A. Perform Verification activities*
 - B. Perform Validation activities*
 - C. Perform Data Assessment*
2. *As a part of the review process it will be necessary to assign data validation qualifiers e.g. zero/span performance, flow performance. AQS data validation codes may be found at*
<https://aqs.epa.gov/aqsweb/codes/data/QualifierCodes.html>
3. *Identify by name and organization who will perform the specific steps in the process.*
4. *Describe the process for officially revising or amending data after it has been submitted.*

D.2 Verification and Validation Methods

All data will be verified and validated in accordance with Facility or Consultant SOPs. Ensure the SOP details the steps and principles contained in EPA QA/G8 Guidance on Environmental Data Verification and Data Validation EPA/240/R-02/004.

Identify by name and organization who will have authority to invalidate within the organization.

Note: Data submitted to the Department of Natural Resources will be reviewed. If questionable, the department will request clarification from F/C.

D.3 Reconciliation with Data Quality Objectives

Once data results are compiled a review of the data to determine if they fall within the acceptable limits will be undertaken. Completeness will also be evaluated to determine if the completeness goal for this project has been met. If completeness

is inadequate, the Air Pollution Control Program will advise of the need to provide additional monitoring data.

Steps for evaluation of data quality:

1. Calculate precision and bias for quarterly data set and when applicable for annual results.
2. Determine if quality goals were met if not state the impact on the data set.
3. How did the results match up with the pre sampling conception? Analyze exceedances consistent with permit or other requirements.

There is a helpful US EPA resource for performing some of the data quality calculations: US EPA Data Assessment Statistical Calculator (DASC) available at: <http://www.epa.gov/ttnamti1/qareport.html>