

A.1.2 Major Functions:

MDNR

APCP – Monitoring Unit

- a. Coordinate state ambient air monitoring network.
- b. Review and approve QAPPs.
- c. Review and approve siting locations.
- d. Review and approve monitoring reports, and provide comments as appropriate.
- e. Conduct Technical Systems Audit once per year, per parameter, per consultant.

ESP – Air Quality Assurance Unit

- a. Review and evaluate QAPPs and SOPs from industries.
- b. Conduct additional external performance and technical systems audits on industry monitoring sites as appropriate.
- c. Review and evaluate QA/QC data from industries as requested by the APCP.
- d. Provide technical assistance to air monitoring field staff as requested.
- e. Conduct Technical Systems Audit once per year, per parameter, per consultant.

Monitoring Facility and/or Consultant (revise as necessary)

- a. Collect filter-based and/or continuous criteria pollutant and/or meteorological data. Review data for errors and malfunctions and make corrections.
- b. Report data and quality control and assurance assessments to Air Pollution Control Program. Reports in hard copy and electronic format. Electronic data will be AQS format, with site identification.
- c. Perform required periodic checks of instruments at identified frequency. Evaluate instrument performance and take corrective action when needed. Maintain appropriate instrument and standard material certifications.
- d. Evaluate the condition of field equipment and maintain equipment

replacement schedule. Purchase equipment needed to complete monitoring commitments.

- e. Install new sites; install and calibrate monitoring instruments.
- f. Conduct performance and technical systems audits on monitoring sites.

A.2 Problem Definition / Background

There are a variety of potential reasons for an ambient air quality monitoring project. Examples include prevention of significant deterioration (PSD) pre-or post-construction monitoring, monitoring required by a consent agreement related to a State Implementation Plan (SIP), or monitoring required by an enforcement action. The following paragraphs are an example of the monitoring objective for a PSD project.

The objective of PSD monitoring is to determine the effect emissions are having or may have on air quality in areas significantly impacted by the new sources. The ambient air monitoring is being performed to satisfy the pre/post construction air monitoring PSD construction requirements, and to demonstrate continued compliance with the National Ambient Air Quality Standards, which are listed in Appendix 5. The results of the sampling will provide current air quality data so that conditions for permit approval can be established. The purpose of meteorological monitoring, where required, is to provide site-specific meteorological data that can be used for air quality modeling. Principal uses of the data are as follows:

- a. To establish background air quality concentrations in the vicinity of the proposed source or modification. These background levels are important in determining whether the air quality before or after construction, are or will be approaching or exceeding the NAAQS or PSD increment.
- b. To provide an estimate of the reasonableness of any modeled impacts.
- c. Post construction monitoring for criteria pollutants may, in general, be conducted for the following reasons:
 - 1. NAAQS are threatened – The post construction air quality is projected to be so close to the NAAQS that monitoring is needed to certify attainment or to trigger appropriate SIP related actions if non-attainment results.
 - 2. Source impact is uncertain or unknown – Factors such as complex terrain, fugitive emissions, and other uncertainties in source or emission characteristics result in significant uncertainties about the projected impact of the source or modification.

3. Include additional information specific to this project. Briefly, describe the industrial process at this facility and any special permit conditions related to this project.

A.3 Project/Task Description

a. Project Description

1. State specifics of parameters to be sampled, sampling project duration and sample frequency required for pre-or post-construction PSD monitoring, monitoring required by a consent agreement related to a SIP, or monitoring required by an enforcement action. Reference Appendix 3.
2. Modify and reference Appendix 2 for site information. The locations must meet EPA siting criteria for comparison to NAAQS
3. State that the monitoring agency will self assess and report quarterly compliance with quality goals listed in appendix 4. If goals are not met documented investigation and corrective actions will be required.

b. Schedule of events

	Target Date
1. F/C Submit QAPP to APCP*	<u>As per permit condition or other requirement</u>
2. APCP will review, evaluate and return QAPP to facility.	<u>Goal is 60 days from receipt</u>
3. APCP will approve site.	<u>Goal is 30 days from notification of proposed site</u>
4. F/C to begin sampling.	<u>As per permit condition or enforcement action</u>
5. F/C to perform technical systems audit	Within 90 days of beginning of sampling
6. F/C submit reports and data to APCP	Within 60 days of the end of the quarter
7. Inform APCP of monitored NAAQS exceedance.	Within 30 days of occurrence
8. APCP communicate to facility monitoring approved	Within 60 days of final report receipt

*Sampling may begin prior to the QAPP review and evaluation process, however, APCP will reserve the right to refuse any data collected prior to approving the QAPP.

A.4 Data Quality Objectives and Criteria for Measurement Data

The tables in Appendix 4 should be modified to contain only the parameters to be monitored for the project.

1. See Appendix 4-A and/or 4-B for Data Precision, Bias, and Detection Limits requirements.
2. See Appendix 4-C for Performance Evaluation for gaseous species.
3. See Appendix 4-D for Data Representativeness requirements.
4. See Appendix 4-E for Data Comparability requirements.
5. See Appendix 4-F for Data Completeness requirements.

Measurement quality should be equal to or better than the limits of 40 CFR 58, Appendix B.

A.5 Special Training Requirements/Certification

Personnel assigned to ambient air monitoring activities are expected to have met the educational, work experience, responsibility, personal attributes, and training requirements for their positions. Appropriate training shall be available to all employees supporting the Ambient Air Quality Monitoring Program, commensurate with their duties. Ambient air monitoring professionals with several years of experience will have responsibility for conducting the most significant quality control and quality assurance activities on site. Training will be documented in Standard Operating Procedures.

A.6 Documentation and Records

The Air Pollution Control Program will coordinate comments, approvals and distribution of the QAPP.

This table represents the categories and types of records and documents that are kept related to air monitoring. Current copies of all documents will be maintained at the specified locations. Copies of past documents will be kept according to the retention time schedule. Any electronic records should be retained indefinitely.

Categories	Record/Document Types	Location [Facility or Consultant (F/C), MDNR]	Minimum Retention Time (yrs.)*
Management and Organization	Quality Management Plan	MDNR	5
	Quality Assurance Project Plan (QAPP)	F/C&MDNR	5
	Personnel qualification and training	F/C	5
Site Information	Site audits	MDNR F/C	5
Environmental Data Operations	Standard operating procedures (SOP)	F/C&MDNR	5
	Field and laboratory notebooks	F/C	5
	Quality control records	F/C	5
	Sample handling/custody records	F/C	5
	To facilitate Technical System Audits by MDNR, documents such as the following should be provided (electronically if possible) to MDNR once per year in advance of scheduled TSA: QAPP and/or SOPs if any changes, EPA protocol tank certification, certification document for flow device(s) used to verify dilution calibrator flows, documentation of quarterly dilution calibrator flow verifications, documentation of semi-annual instrument calibration, and other documentation as may be required by the auditor.	F/C&MDNR	5
Raw Data	Any original data	F/C	5
Data Reporting and Data Management	Data summary reports	F/C&MDNR (as received)	5

*PSD, enforcement, and/or SIP records will be maintained by APCP consistent with the MDNR records retention schedule. This schedule may be up to 100 years depending on the record.