ADEC Ambient Air and/or Meteorological Monitoring Quality Assurance Project Plan (QAPP) Review Checklist

The applicant must develop a QAPP for use in a proposed monitoring project. The QAPP will be used by all parties involved in the monitoring project as a road map to collecting valid monitoring data. Failure to follow the provisions in the QAPP may likely result in the invalidation of monitoring data and may result in the requirement for additional monitoring. Responsibility for conducting field monitoring and data analysis in compliance with the QAPP, and performing a diligent project oversight, solely rests on the applicant.

Project Title: _____
_____ **Date:** Month/Year

Reviewed By: _____ **Date:** Month/Year

ELEMENT	STATUS	COMMENTS
A. Project Management Elements		
1. Title and Approval Sheet		
Title		
Organization's name(s) implementing project		
Effective date of plan		
Dated signature of Organization's Project Manager		
Dated signature of Organization's Project Quality Assurance Officer		
Dated signature of DEC Air Permits Project Manager		
2. Table of Contents		
3. Distribution List		
In table format list name, organization, email, and phone of all involved with QAPP development and those who will receive the approved QAPP and subsequent revisions		
4. Project/Task Organization		
In table format, identify key individuals with their responsibilities: (data users, decision-makers, project QA manager, contractor, subcontractors, etc.)		
Organizational chart showing lines of authority and lines of reporting responsibility.		
5. Problem Definition/Background and Project Objective/s		
Clearly states problem(s) and/or decision(s) to be resolved		
Provides historical and background information		
Provides overall objective(s) for study		
6. Project/Task Description (SUMMARY ONLY)		
Lists measurements to be made (in Table format)		
Briefly describe monitoring location(s)		
List sampling frequency (in Table format)		
Are special personnel or equipment requirements necessary?		
Provides work schedule of project tasks (in Table format)		
Summarizes required project & QA records/reports (in Table format)		
7. Quality Objectives and Criteria for Measurement (in table format as possible)		
States and characterizes Measurement Quality Objectives (MQOs) as to applicable action levels or criteria for each parameter measured		
References applicable specific regulatory and/or guidance documents/methods, etc. governing data quality objectives		
States measurement method, precision, accuracy, representativeness,		

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detectability, comparability, and completeness criteria limits. (in Table format)		
8. Special Training Requirements/Certification Listed		
Identifies training for site operators and how it will be provided, documented, and assured		
9. Documentation and Records (in table format as possible)		
Lists information and records to be included in data reports (raw data, field and lab logs, lab analyses, results of calibration and QC checks, problems and corrective actions/ resolutions), QAPP revisions, QA audit reports, final reports, etc.		
States requested lab turnaround time, if applicable		
Identifies written and electronic (CD/DVD/email) data reports to be provided to ADEC		
Gives retention time and storage location of records and reports		
B. Measurement and Data Acquisition		
1. Sampling Process Design (in table format when possible)		
Defines the type and number of samples required		
Defines sampling design assumptions and rationale		
Defines when, where, and how samples will be collected		
Identifies sampling locations and frequency		
Characterize sampling locations (photos-4 cardinal directions, looking towards site, then looking away from site)		
Characterize sampling locations (map of local project area, topographic map of area, map showing relevant region of AK, etc.).		
Defines appropriate validation study for non-standard situations		
2. Sampling Methods Requirements (in table format if possible)		
Identifies specific sample collection procedures and methods. Demonstrates compliance with appropriate reference method requirements.		
Explains how sample specific siting will meet method requirements		
Specifies calibration and maintenance procedures. Identifies performance requirements through the use of method-specific data validation tables (DVTs).		
Describes applicable sample preservation methods and maximum holding times (include in method specific data validation tables).		
Applicable SOPs and QA/QC Manuals are referenced and located in QAPP appendices.		
3. Sample Handling and Custody Requirements		
Describes sample handling, labeling, collection and transportation requirements.		
Notes chain-of-custody procedures, if required. Appropriate chain-of-custody forms are referenced in the QAPP appendices.		
4. Analytical Methods Requirements (in table format if possible)		
Identifies specific analytical methods to be followed. Identifies required equipment and compliance with appropriate reference method requirements		
Lists method detection limits or minimum quantification limits (include in method specific data validation tables)		
Specifies calibration and maintenance procedures. Identifies performance requirements through the use of method-specific data validation tables).		
Specifies needed laboratory turnaround time		

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Applicable SOPs and QA/QC Manuals are referenced and located in QAPP appendices.		
5. Quality Control Requirements (in Table format if possible)		
Lists Quality Control requirements for both field and lab. Identifies QC procedures and frequency, acceptance criteria limits, corrective actions, and standards traceability for each sampling, analysis, or measurement technique. **This information must be included as much as possible in a Data Validation Table (DVT) for each parameter/or group of parameters to be measured. DVTs can be referenced and located in QAPP appendices.**		
Certification to span expected instrument measurement ranges. (For example, if temps vary from -40C to +30C, standards should be traceable over this entire range; if CO is expected to max out at 40 ppm, that entire range should be certified.)		
Defines & references the procedures or algorithms used to calculate QA/QC statistics including precision, accuracy, and completeness.		
6. Instrument/Equipment Testing and Inspection (QA) and Maintenance Requirements (in table format when possible)		
Identifies acceptance testing of sampling process and of field and lab measurement systems		
Describes equipment preventive and corrective maintenance		
Notes availability and location of spare parts		
Checklists and worksheets documenting testing, inspection, and maintenance are included in the QAPP appendices.		
7. Instrument Calibration and Frequency (in table format when possible)		
Specifies calibration (frequency, range, control criteria, etc) for each instrument or piece of equipment needing calibration.		
Specifies calibration/certification/traceability (certification date, expiration date, range, accuracy, etc.) for each calibration standard used and shows compliance with appropriate method requirements.		
Specifies required calibration standards and/or equipment		
Cites calibration records and manner traceable to equipment		
Calibration forms		
8. Inspection/Acceptance Requirements for Supplies and Consumables (presented in table format when possible)		
States acceptance procedure and criteria for supplies & consumables		
States how records are kept		
Notes responsible individual(s)		
9. Data Acquisition Requirements for Nondirect Measurements (presented in table format as much as possible)		
Identifies type of data needed from nonmeasurement sources (e.g., computer databases, literature files, climatological records), along with acceptance criteria for their use		
Describes any limitations of such data		
10. Data Management (presented in table format when possible)		
Describes project data management process and traces path from data generation through data use and/or storage **via flow chart** (this includes control mechanisms for detecting/correcting errors and audits of data management system).		
Describes standard record-keeping, including data storage and retrieval requirements		

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Checklists or standard forms are included in QAPP appendices		
Describes data handling equipment and procedures used to process, compile, & analyze data (ex: required computer hardware/software)		
Data reports formatted to meet PSD model input requirements.		
C. Assessments and Oversight		
1. Assessments & Response Actions (in table format if possible)		
Instrument Performance Audits (Accuracy) – specifies audit method, audit frequency, audit criteria, and audit tools (equipment and standards), for all parameters to be audited. Audit forms included in QAPP appendices.		
Data Quality Audits – specifies audit method/process, frequency, and audit criteria for each measurement method. Audit forms included in QAPP appendices.		
Technical Systems Audit – A comprehensive audit of the entire measurement system from data collection through data reporting. Specifies audit frequency, range, etc. Audit forms included in QAPP appendices.		
Network Reviews		
Corrective Action Report(s) and Corrective Action Response(s)		
Timeline for issuance of an audit report, corrective action report, and report of the response taken to rectify problem(s). Include who is responsible for issuing audit report, who receives audit report, who issues corrective action report, who issues the response to corrective action report.		
QAPP Revisions – describes process to revise QAPP (if monitoring methods, criteria, siting, or other element changes).		
2. Reports to Management (in Table format if possible)		
For the following reports describe the frequency, content, responsible position or individual for issuing each report and distribution of each to management and others:		
Performance Audit Reports		
Data (Quality) Performance Audits Reports		
Technical Systems Audit Reports		
Network Reviews		
QA Annual Report		
Corrective Action Reports		
Response to Corrective Action Reports		
D. Data Validation and Usability		
1. Data Review, Validation, and Verification Requirements (in table format if possible)		
States method-specific criteria for accepting, rejecting, or qualifying data. Method specific Data Validation Tables summarizing these criteria should be referenced and may be located in QAPP appendices.		
Includes project-specific calculations or algorithms		
2. Validation and Verification Methods		
Describes process for data validation and how criteria will be used to validate, qualify and/or invalidate data. Include validation forms/checklists in the QAPP appendices.		
Describes process for data verification and how conclusions can be correctly drawn from the validated data. Include verification forms/checklists in the QAPP appendices.		

ELEMENT	STATUS	COMMENTS
Identifies issue resolution procedure and responsible individual(s)	✔	
Identifies method for conveying results to data users	✔	
3. Reconciliation with User Requirements		
Describes process for reconciling project results with project objectives and reporting any limitations on use of data	✔	

These elements, when adequately completed, meet the State and Federal QAPP requirements.
For further guidance see EPA QA/R-5 (https://www.epa.gov/quality/epa-qar-5-epa-requirements-quality-assurance-project-plans), EPA QA/G-5 (https://www.epa.gov/quality/guidance-quality-assurance-project-plans-epa-qag-5) and Elements for Ambient Air Monitoring QAPP (https://dec.alaska.gov/air/air-monitoring/quality-assurance-plans/)

✔ Acceptable- no other information needed.

Information must be changed or fixed.

✘ Not acceptable: major additions or changes required.

ⓘ Information is provided for benefit of applicant.

? Information is incomplete: some clarification is necessary.