



**MISSOURI**  
 DEPARTMENT OF  
 NATURAL RESOURCES

## QAPP Review Checklist

PROJECT TITLE:

Preparer:  
 Reviewer:

Date Submitted for Review:  
 Date of Review:

Note: A=Acceptable U=Unacceptable NI=Not Included NA=Not Applicable

ELEMENT	A	U	NI	NA	Page # Section #	COMMENTS
<b>Title</b> <b>Table of Contents</b> <b>Distribution</b> <b>Approval Page</b>						
<b>Title</b>						
Contains project name						

Name of Parent Company and Consultants, addresses and contact information						
Project year						
Prepared by						
EIQ Facility ID# or Permit# or Enforcement Case#						
Header information i.e. Project Name, Revision No., Date and Page						
<b>Table of Contents</b>						
Lists QA Project Plan information sections						
<b>Distribution List</b>						
Includes all individuals who are to receive a copy of the QA Project Plan and identifies their organization						

<b>Approvals</b>						
Department of Natural Resources ACP Approval Signature Lines						
Facility and Consultant Signatures						
<b>A. Project Management</b>						
<b>A.1. Project/Task Organization</b>						
Identifies key individuals involved in all major aspects of the project, including contractors. Lists names and organizations						
<b>A.1.1. Key Personnel / Areas of Responsibility</b>						
Name, organization, and project function listed						
<b>A.1.2. Major Functions</b>						
Clearly lists major functions to be performed and what organization will perform						

Organizational chart shows lines of authority						Appendix 1
<b>A.2. Problem Definition/Background</b>						
States decision(s) to be made, actions to be taken, or outcomes expected from the information to be obtained						Default Text
Clearly explains the reason (site background or historical context) for initiating this project						Default Text
Identifies regulatory information, applicable criteria, action limits, etc. necessary to the project						Default Text
Describes industrial process						
Contains any special permit conditions						
<b>A.3. Project/Task Description</b>						
Summarizes work to be performed, for example, parameters to be sampled and at what frequency						

Project duration and planned start/stop dates						
Summarizes products to be produced including data assessment by F/C						
Provides project schedule indicating critical project points,						Default table
Details geographical locations to be studied, including maps where possible						Appendix 2
<b>A.4. Data Quality Objectives and Criteria for Measurement Data</b>						
Identifies performance/measurement criteria for all information to be collected and acceptance criteria for information obtained from previous studies, including project action limits, detection limits, and range of anticipated concentrations of each parameter of interest						Appendix 4 A,B,C,D,E,F
Discusses data precision, bias, and data detection limit						Appendix 4A and/4B

Discusses desired method sensitivity (detection limits) and performance evaluation to evaluate sensitivity						Appendix 4A,C
Discusses data representativeness						Appendix 4D
Describes the need for data comparability						Appendix 4E
Identifies the need for data completeness						Appendix 4F
<b>A.5. Special Training Requirements/Certification</b>						
Identifies any project personnel specialized training or certifications						Default Text
Discusses how this training will be provided						SOP
Indicates personnel responsible for assuring these are satisfied						SOP
Identifies where this information is documented						SOP

<b>A.6. Documentation and Records</b>						
Identifies report format and summarizes all data report package information						Default Text
Lists all other project documents, records, and electronic files that will be produced. (F/C updated)						Default Text
Identifies where project information should be kept and for how long						Default Text
States who will be responsible for distribution of the most current QA Project Plan to the individuals listed in A1.						
<b>B. DATA GENERATION AND ACQUISITION</b>						
<b>B.1. Sampling Process Design</b>						
Describes and justifies design strategy, indicating size of the area, volume, or time period to be represented by a sample. Justification of site selection						And Appendix 2

Details the type and total number of samples needed						Appendix 4F
States the frequency of sampling and the justification of this frequency						
Meteorological data included to support justification						Appendix 2
Indicates number of collocated parameters e.g. PM-10 Manual Method						
<b>B.2. Sampling Methods</b>						
Brief description of sample collection procedures and what constitutes a sample						SOP
List of EPA reference and/or equivalent methods used						
Equipment required, i.e. model information						
Identify performance requirements, i.e. manufacturer's specifications						SOP

Addresses actions to be taken when problems occur, identifying individual(s) responsible for corrective action and how this should be documented						SOP
Averaging intervals for continuous methods						SOP
List of method codes to be used						
<b>B.3. Sample Handling and Custody</b>						
States maximum holding times allowed from sample collection to extraction and/or analysis for each sample type and, for in-situ or continuous monitoring, the maximum time before retrieval of information						SOP
Identifies how samples or information should be physically handled, transported, and then received and held in the laboratory or office (including temperature upon receipt)						SOP

Indicates how sample or information handling and custody information should be documented, such as in field notebooks and forms, identifying individual responsible						SOP
Discusses system for identifying samples, for example, numbering system, sample tags and labels, and attaches forms to the plan						SOP
Identifies chain-of-custody procedures and includes form to track custody						SOP
<b>B.4. Analytical Methods</b>						
<b>Field</b>						
Description of field analytical methods used, e.g. O3,SO2,NO2,CO,PM10-TEOM						SOP
Method validation information						SOP
Identifies procedures to follow when failures occur, identifying individual responsible for corrective action and appropriate documentation						SOP

<b>Laboratory, if used</b>						
Identifies laboratory analytical methods used e.g. gravimetric, ICP, AA etc.						SOP
Specifies any specific method performance criteria						SOP
Identifies laboratory equipment and equipment performance criteria.						SOP
Method validation information						SOP
Identifies procedures to follow when failures occur, identifying individual responsible for corrective action and appropriate documentation						SOP
<b>B.5. Quality Control</b>						
For each type of sampling, analysis, or measurement technique, identifies QC activities which should be used						SOP

Details what should be done when control limits are exceeded and how documented.						SOP
List action levels and corrective action for the following field checks Zero, Span, Flow and Leak						
<b>B.6. Instrument/Equipment Testing, Inspection, Maintenance, and Calibration</b>						
Identifies field and laboratory analyzers and samplers needing periodic maintenance, calibration and the schedule to perform. Includes: field analyzers, samplers, laboratory equipment						SOP
List of QC and QA equipment requiring periodic certification. Includes gravimetric balances, flow orifices, gas calibrators, calibration gases, laboratory standards, remote zero/span systems, ozone generators, temperature reading devices, pressure reading devices, manometers, flow standard devices(BIOS and bubble meters) and etc.						
Identifies QC and QA equipment certification criteria and schedule.						SOP

Identifies individual(s) responsible for testing, inspection and maintenance						SOP
Indicates how deficiencies found should be resolved.						SOP
<b>B.7. Inspection/Acceptance of Supplies and Consumables</b>						
List of consumables. Includes particulate filters, calibration gases and laboratory standards						
Identifies acceptance criteria						SOP
<b>B.8. Data Management</b>						
Describes data management scheme from field to final use and storage						SOP
Discusses standard record-keeping, types of electronic documents and tracking practices, and the document control system.						SOP
List types of electronic documents						SOP
List type of data logger and procedures that should be used to process, compile, analyze, and transmit data reliably and						SOP

accurately						
Identifies name(s) of individual(s) responsible handling different stages of data flow						
Describes the process for data archival and backup						SOP
<b>C: ASSESSMENT and OVERSIGHT</b>						
<b>C.1. Assessments and Response Actions: Performance and Systems Audits</b>						
States equipment used for audits must be different from equipment used for QC activities						SOP
States the F/C will perform a TSA within 90 days of the beginning of sampling						Default Text
List what audits will take place e.g. TSA, performance or data						
Lists the frequency of the audits						SOP and Appendix 4
List the per audit and per project audit goals						SOP and Appendix 4A,B

If internal auditors states the separation within the organization.						Appendix 1
If external non-governmental auditors, list qualifications						
Identify what will happen in the event of an audit failure and who will correct						SOP
Lists precision activities						Appendix 4
Identifies individual(s) responsible for conducting assessments						Listed in A.1.1
<b>C.2 Reports to APCP</b>						
Identifies what project QA status reports are needed and how frequently						Default Table
Identifies who should write these reports and who should receive this information						Default Table

<b>D. Data Validation and Usability</b>						
<b>D.1. Data Review, Verification, and Validation</b>						
Describes criteria that should be used for accepting, rejecting, or qualifying project data						SOP
<b>D.2. Verification and Validation Methods</b>						
Describes process for data verification						SOP
Describes process for data validation						SOP
Identifies name of individual responsible for verification steps						
Identifies name of individual responsible for validation steps						
List of data validation qualifiers e.g. zero/span performance and flow performance						SOP

<b>D.3. Reconciliation with Data Quality Objectives</b>						
Describes procedures to evaluate the uncertainty of the validated data						Default Text
Describes how precision and accuracy will be calculated including formulas						SOP
Describes how limitations on data use should be reported to the data users						Appendix 4
<b>Appendices</b>						
<b>Appendix 1.</b> Organization Chart						
<b>Appendix 2.</b> Ambient Air Monitoring Network Site Information						
<b>Appendix 4A,B</b> Minimum PSD Data Assessment Requirements (if a PSD project)						
<b>Appendix 3.</b> Parameter Table						
<b>Appendix 4A.</b> Data Quality Requirements and Assessments, Meteorological Measurements						

<b>Appendix 4 B.</b> Ambient Air Monitoring – Measurement Quality Objectives						
<b>Appendix 4 C.</b> Annual Performance Evaluation for SO <sub>2</sub> , NO <sub>2</sub> , O <sub>3</sub> , or CO						
<b>Appendix 4D.</b> Data Representativeness						
<b>Appendix 4E.</b> Data Comparability						
<b>Appendix 4F.</b> Data Completeness						
<b>Appendix 5.</b> US EPA - National Ambient Air Quality Standards (NAAQS)						
<b>Appendix 6.</b> List of Acronyms						
<b>Appendix 7.</b> References						
<b>Appendix 8.</b> Reports and Records						