QUALITY ASSURANCE PROJECT PLAN REVIEW CHECKLIST

This checklist will be used to review Quality Assurance Project Plans (QAPPs) that are submitted to the California Air Resources Board (ARB) from monitoring organizations within ARB’s Primary Quality Assurance Organization (PQAO). This checklist was developed by the U.S. Environmental Protection Agency (EPA) following those elements found in *EPA Requirements for QA Project Plans (QA/R-5)* (EPA, 2001a)\(^1\) and *EPA Guidance for QA Project Plans (QA/G-5)* (EPA, 2002)\(^2\).

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<td>REVIEWER: __________________________</td>
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Note: A = Acceptable  U = Unacceptable  NI = Not Included  NA = Not Applicable

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<td>Includes all individuals who are to receive a copy of the QA Project Plan and identifies their organization</td>
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<td>Identifies key individuals involved in all major aspects of the project, including contractors</td>
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<td>Project QA Manager position indicates independence from unit generating data</td>
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<td>Identifies individual responsible for maintaining the official, approved QA Project Plan</td>
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<td><strong>A5. Problem Definition/Background</strong></td>
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<td>States decision(s) to be made, actions to be taken, or outcomes expected from the information to be obtained</td>
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<td>Clearly explains the reason (site background or historical context) for initiating this project</td>
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<td>Summarizes work to be performed, for example, measurements to be made, data files to be obtained, etc., that support the project’s goals</td>
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<td>Provides work schedule indicating critical project points, e.g., start and completion dates for activities such as sampling, analysis, data or file reviews, and assessments</td>
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<td>Details geographical locations to be studied, including maps where possible</td>
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<td>Identifies performance/measurement criteria for all information to be collected and acceptance criteria for information obtained from previous studies, including project action limits and laboratory detection limits and range of anticipated concentrations of each parameter of interest</td>
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<td>Identifies any project personnel specialized training or certifications</td>
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<td>Discusses how this training will be provided</td>
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<td>Indicates personnel responsible for assuring these are satisfied</td>
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**A.9 Documentation and Records**

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<td>Identifies where this information is documented</td>
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<td>Identifies report format and summarizes all data report package information</td>
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<td>Lists all other project documents, records, and electronic files that will be produced</td>
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<td>Identifies where project information should be kept and for how long</td>
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<td>Discusses back up plans for records stored electronically</td>
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<td>States how individuals identified in A3 will receive the most current copy of the approved QA Project Plan, identifying the individual responsible for this</td>
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**DATA GENERATION and ACQUISITION**


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<td>Describes and justifies design strategy, indicating size of the area, volume, or time period to be represented by a sample</td>
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<td>Details the type and total number of sample types/matrix or test runs/trials expected and needed</td>
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<td>Indicates where samples should be taken, how sites will be identified/located</td>
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<td>Discusses what to do if sampling sites become inaccessible</td>
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<td>Identifies project activity schedules such as each sampling event, times samples should be sent to the laboratory, etc.</td>
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<td>Specifies what information is critical and what is for informational purposes only</td>
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<td>Identifies sources of variability and how this variability should be reconciled with project information</td>
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**B2. Sampling Methods**

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|---|---|---|---|---|---|
| Identifies all sampling SOPs by number, date, and regulatory citation, indicating sampling options or modifications to be taken | | | | | |
| Indicates how each sample/matrix type should be collected | | | | | |</p>
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<td>If <em>in situ</em> monitoring, indicates how instruments should be deployed and operated to avoid contamination and ensure maintenance of proper data</td>
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<td>If continuous monitoring, indicates averaging time and how instruments should store and maintain raw data, or data averages</td>
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<td>Indicates how samples are to be homogenized, composited, split, or filtered, if needed</td>
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<td>Indicates what sample containers and sample volumes should be used</td>
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<td>Identifies whether samples should be preserved and indicates methods that should be followed</td>
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<td>Indicates whether sampling equipment and samplers should be cleaned and/or decontaminated, identifying how this should be done and by-products disposed of</td>
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<td>Identifies any equipment and support facilities needed</td>
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<td>Addresses actions to be taken when problems occur, identifying individual(s) responsible for corrective action and how this should be documented</td>
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<td><strong>B3. Sample Handling and Custody</strong></td>
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<td>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</td>
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<td>Identifies how samples or information should be physically handled, transported, and then received and held in the laboratory or office (including temperature upon receipt)</td>
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<td>Indicates how sample or information handling and custody information should be documented, such as in field notebooks and forms, identifying individual responsible</td>
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<td>Discusses system for identifying samples, for example, numbering system, sample tags and labels, and attaches forms to the plan</td>
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<td>Identifies chain-of-custody procedures and includes form to track custody</td>
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<td>Identifies all analytical SOPs (field, laboratory and/or office) that should be followed by number, date, and regulatory citation, indicating options or modifications to be taken, such as sub-sampling and extraction procedures</td>
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<td>Identifies equipment or instrumentation needed</td>
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<td>Specifies any specific method performance criteria</td>
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<td>Identifies procedures to follow when failures occur, identifying individual responsible for corrective action and appropriate documentation</td>
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<td>Identifies sample disposal procedures</td>
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<td>Specifies laboratory turnaround times needed</td>
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<td>Provides method validation information and SOPs for nonstandard methods</td>
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<td>For each type of sampling, analysis, or measurement technique, identifies QC activities which should be used, for example, blanks, spikes, duplicates, etc., and at what frequency</td>
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<td>B7. Instrument/Equipment Calibration and Frequency</td>
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<td>Describes how calibrations should be performed and documented, indicating test criteria and standards or certified equipment</td>
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<td>B8. Inspection/Acceptance for Supplies and Consumables</td>
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<td>Identifies critical supplies and consumables for field and laboratory, noting supply source, acceptance criteria, and procedures for tracking, storing and retrieving these materials</td>
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<td>Identifies data sources, for example, computer databases or literature files, or models that should be accessed and used</td>
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<td>Identifies key resources/support facilities needed</td>
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<td>Identifies data handling equipment/procedures that should be used to process, compile, analyze, and transmit data reliably and accurately</td>
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**ASSESSMENT and OVERSIGHT**

**C1. Assessments and Response Actions**

- Lists the number, frequency, and type of assessment activities that should be conducted, with the approximate dates
- Identifies individual(s) responsible for conducting assessments, indicating their authority to issue stop work orders, and any other possible participants in the assessment process
- Describes how and to whom assessment information should be reported
- Identifies how corrective actions should be addressed and by whom, and how they should be verified and documented

**C2. Reports to Management**

- Identifies what project QA status reports are needed and how frequently
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<td>Identifies who should write these reports and who</td>
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<td>individual responsible for conveying these results to data users</td>
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2. EPA Guidance for QA Project Plans (QA/G-5) (EPA, 2002), [www.epa.gov/QUALITY/qs-docs/g5-final.pdf](http://www.epa.gov/QUALITY/qs-docs/g5-final.pdf)