**EPA REGION 8 QAPP REVIEW CROSSWALK**  
**CIO 2105-S-02 (QA/S-2)**

This crosswalk will be used to review the Quality Assurance Project Plans (QAPPs) submitted to EPA Region 8 for review under the EPA Quality Policy and Procedure Order 2105 (current version). Items from this checklist are discussed in detail in the *EPA Quality Assurance Project Plan Standard CIO 2105-S-02* (QA/S-2)and *EPA Environmental Information Quality Policy CIO 2105* (current versions), <https://www.epa.gov/irmpoli8/environmental-information-policy-procedures-and-standards>. Consult these resources for more information on the items below. Note that a separate crosswalk is used for Uniform Federal Policy-Quality Assurance Project Plans (UFP-QAPPs) (<https://www.epa.gov/quality/managing-quality-environmental-data-epa-region-8>).

This crosswalk is a controlled document. Do not modify the Region 8 EPA QAPP Review Crosswalk format or document type. Information in the “Elements” column within the crosswalk describe requirements, and may not be modified. Sections/lines in green are to be completed if the QAPP preparer is an EPA Organization; sections/lines in orange are to be completed if the QAPP preparer is a Non-EPA Organization. Remaining sections / lines must be completed by all organizations.

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| **QAPP Preparer must complete as part of the submission:** | | | | | | | | | | | | | | |
| **QAPP and Crosswalk completion/submission INSTRUCTIONS:** | | | | | | | | | | | | | | |
| * The QAPP must address all required elements and include all attachments/appendices (SOPs, figures, tables, etc.). If a Crosswalk section is not relevant due to organization type, leave blank in the Crosswalk. If a QAPP element is not applicable, an explanation must be provided in the QAPP and in the Comments column of this crosswalk. * The “**Organization’s QAPP Section”** column on the Crosswalk must be completed to reference the precise location(s) in the QAPP that addresses that specific element. * Processes may either be described or referenced in the QAPP; all references must be readily accessible within the organization **and** provided in or as attachments to the QAPP. * Cited directives and regulations provided within this QAPP Review Crosswalk are for clarity and convenience. Please ensure the directive(s), regulation(s), requirement(s), and language are adhered to within the QAPP. * QA review comments will be provided in the “**Summary of Comments**” section and in the “**Comments**” column of the crosswalk. Address the comments by revising the QAPP and documenting within the crosswalk where “**Organization Response**” is indicated. | | | | | | | | | | | | | | |
| **QAPP Prepared for:** *(Check appropriate box below)* | | | | | | | | | | | | | | |
| **EPA Organizations:**  *Also, complete element requirements specific to EPA Organizations in A2, A11, A12, and B (green lines)* | | |  | | | **EPA R8 PROGRAM** | | | **Non-EPA Organizations:**  *Also, complete element requirements specific to Non-EPA Organizations in A1, A2, and A10 (orange lines)* | |  | **GRANT RECIPIENT**  2 CFR 1500.12 |  | **INTERAGENCY AGREEMENT (IA)** |
|  | | | **EPA R8 RESEARCH**  (e.g., ROAR, R2P2) | | |  | **CONTRACTOR**  48 CFR 46 |  | **Other (list):** |
| **Organization** *(grant recipient, contractor, EPA AO, EPA Program, other):* | | |  | | | | | | **Organization Point of Contact and Information:**  *(Name, Title, Email)* | |  | | | |
| **Document Title:** | | | Click here – enter document title (linked to header) | | | | | | **QAPP Preparer:**  *(If different than Organization POC)* | |  | | | |
| **Document Version and Date:** | | |  | | | | | | **Contract, Grant, or IA Number:** | |  | | | |
| **QAPP Period of Performance:** | | |  | | | | | | **EPA PO / COR:**  *(Name, Email)* | |  | | | |
| **Review Type/Status:** | | |  | | **New or Revised QAPP**  **Annual Review** *(complete “Annual Review Information”)* | | | | | | | | | |
| **Annual Review Information** (*if applicable*)**:** | | | | | | | | | | | | | | |
| QAPP Approval Date: | | | | MM/DD/YYYY | | | | | **Attestation of the Annual Review** (*select as appropriate*)**:** | | | | | |
| Annual Review Completion Date(s): | | | | | | | | |  | Changes are documented in the Crosswalks Comments column. | | | | |
|  | **Year 2:** | MM/DD/YYYY | | | | | **Year 4:** | MM/DD/YYYY |  | No significant changes were made. | | | | |
| **Year 3:** | MM/DD/YYYY | | | | | **Year 5:** | MM/DD/YYYY |
| **Documents to be submitted along with the QAPP and Crosswalk:** | | | | | | | | | | | | | | |
| **All Organizations:** | | | | | | | | | **Non-EPA Organizations:** | | | | | |
| If this is an overarching or programmatic QAPP with nested SAPs, the QAPP must be submitted with the templates. Subsequent SAPs must be submitted with the approved QAPP. | | | | | | | | | A QAPP written by a Grant Recipient or Federal Partner must include for review: Work Plan (WP) / Statement of Work or Scope of Work (SOW) / Performance Work Statement (PWS/QASP) / Program Plan (PP) / Research Proposal (RP) and funding mechanism.  A QAPP written by a Contractor must include for review:   1. Copy of Task Order Work Assignment/SOW/PWS/QASP; 2. Copy of the contractor’s approved QMP (link or document); 3. Copy of Contract SOW (if no QMP has been approved); and 4. Copy of EPA Court Order, if applicable. | | | | | |
| **EPA Organizations:** | | | | | | | | |
| A QAPP written by an EPA Program to describe programmatic work will only submit the QAPP and Crosswalk.  A QAPP written by EPA personnel that is for a research activity must include for review the scope of work or research proposal. | | | | | | | | |

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| **EPA QA Reviewer must complete as part of the review:** | | | | | | | |
| *All submissions and responses must be tracked on this Crosswalk. Information in blue and green are the suggested approach to ensuring that each review process is independently tracked.* | | | | | | | |
| EPA Technical Reviewer and Contact Information: | | |  | Date Received for QA Review: | | | 1st Review: MM/DD/YYYY  2nd Review: MM/DD/YYYY |
| EPA QA Reviewer and Contact Information: | | |  | Date Review Completed: | | | 1st Review: MM/DD/YYYY  2nd Review: MM/DD/YYYY |
| EPA QA Reviewer (QA Branch or DAO)? | | | QAB  DAO  QAB ID#: | EPA QA Approving Official and Contact Information: | | |  |
| **Funding Mechanism Information:** | | | | | | | |
| interagency agreement  / contract  / grant  / court order  / Other  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ / NA | | | | WP/SOW/TO/PP/RP Date: | | |  |
| Funding Amount $ | | |  | Performance Period: | | |  |
| **QA document(s) reviewed:** | | | | | | | |
| Stand-alone QAPP? | | | Yes  No | QA document consistent with WP/SOW/TO/PP/RP? | | | Yes  / No  / NA |
| SAP submitted with QAPP?  Date of QAPP: | | | Yes  / No  / NA  MM/DD/YYYY |
| All attachments included? | | | Yes  / No  / NA |
| **Annual Review** (*if applicable, Select One*)**:** | | | | | | | |
|  | The EPA QA Reviewer concurs no significant change was made to the document and the annual review is complete. | | | |  | The EPA QA Reviewer concluded that significant changes were made to the document, and a complete review was conducted, see below for comments. | |
|  | Date Completed: | MM/DD/YYYY | | |

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| **Complete as part of the QA review:** |
| **Crosswalk Guidance:** |
| * “**EPA Notes**” are notes, recommendations, or observations that may improve the QAPP; but do not require compliance. * An “NA” in the Acceptable column signifies agreement that the element is not applicable and the reason is included & appropriate. * “**EPA Comments**” require the QAPP author to address for compliance with the EPA QAPP Standard (QA/S-2). * Include in the “**Summary of Comments**” a highlight of the significant concerns or issues identified within the QAPP. * It is recommended to follow the example format in “**Summary of Comments**” to provide comments throughout the crosswalk. * When reviewing the revised QAPP, all comments must be addressed, as documented by completion of the “**EPA Resolved (date)**.” |
| **Summary of Comments** *(highlight significant concerns/issues)***:** |
| 1. EPA Comment:   Organization Response (date):  EPA Resolved (date):   1. EPA Comment:   Organization Response (date):  EPA Resolved (date): |

| **Element** | **Acceptable (Yes/No/NA) (*Completed by EPA QA Reviewer)*** | **Organization's QAPP Section *(Completed by QAPP Author*)** | **Comments**  ***(Completed by QAPP Author and EPA QA Reviewer*)** |
| --- | --- | --- | --- |
| **A. Project Management and Information/Data Quality Objectives** | | | |
| **A1. Title Page (QA/S-2 Pages 8-9)** | | | |
| 1. Name of the document |  |  |  |
| 1. Date of QAPP preparation |  |  |  |
| 1. Organization conducting environmental information operations (EIO) |  |  |  |
| 1. Organization that developed the QAPP |  |  |  |
| 1. Period of applicability |  |  |  |
| 1. Revision / version control information |  |  |  |
| **Non-EPA Organizations shall also specify:** | | | |
| 1. Agreement Traceability:    * Grant or cooperative agreement number    * Contract and task order numbers    * Interagency agreement number    * Title and date of Memoranda of Understanding / Agreement    * Citation of regulatory requirement(s)    * Title / date of enforcement / legal agreement |  |  |  |
| **A2. Approval Page (QA/S-2 Page 9)** | | | |
| **EPA Organization shall include signature/date for:** | | | |
| 1. Operations Manager |  |  |  |
| 1. EPA Quality Assurance Manager (QAM) |  |  |  |
| **Non-EPA Organization shall include signature/date for:** | | | |
| 1. Operations Manager for project |  |  |  |
| 1. Project QA Officer |  |  |  |
| 1. EPA Operations (e.g., COR, PO) |  |  |  |
| 1. EPA RQAM |  |  |  |
| **A3. Table of Contents, Document Format, and Document Control (QA/S-2 Pages 9-10)** | | | |
| 1. Table of contents, including locations of sections, tables, diagrams, charts / figures, worksheets, other attachments / appendices |  |  |  |
| 1. Document control information on every page (title, version number, date, page number in relation to total pages) |  |  |  |
| **A4. Project Purpose, Problem Definition, and Background (QA/S-2 Page 10)** | | | |
| 1. Identifies and addresses other relevant QA planning documents (e.g., QMP) |  |  |  |
| 1. Describes the purpose of the project’s EIO (e.g., research, monitoring, environmental technology, use of existing information) |  |  |  |
| 1. Defines the problem(s) to be addressed and describes the question(s) to be answered |  |  |  |
| 1. Documents the environmental decision(s) that need to be made and the level of information quality needed |  |  |  |
| 1. Identifies the type, quantity, and quality of information needed and describes the acceptance and performance criteria |  |  |  |
| 1. Identifies the applicable regulatory programs and standards |  |  |  |
| 1. Includes the conceptual site model(s) |  |  |  |
| 1. Discusses how the results of the EIO are linked to possible actions/decisions |  |  |  |
| 1. Includes a description/ citation of background information, plans, and/or reports to provide the historical, scientific, and regulatory perspective for the project |  |  |  |
| 1. Identifies the sources for existing information for the project |  |  |  |
| **A5. Project Task Description (QA/S-2 Page 11)** | | | |
| 1. Includes the schedule for all project tasks |  |  |  |
| 1. Describes the work to be performed |  |  |  |
| 1. Includes the products to be produced |  |  |  |
| **A6. Information/Data Quality Objectives and Performance/Acceptance Criteria (QA/S-2 Pages 11-12)** | | | |
| 1. Describes the project’s information/data quality objectives |  |  |  |
| 1. Describes the performance and/or acceptance criteria |  |  |  |
| 1. Describes the following principal information/data quality indicators and their application for the project: | | | |
| 1. Precision |  |  |  |
| 1. Accuracy (bias) |  |  |  |
| 1. Representativeness |  |  |  |
| 1. Comparability |  |  |  |
| 1. Completeness |  |  |  |
| 1. Sensitivity |  |  |  |
| **A7. Distribution List (QA/S-2 Page 12)** | | | |
| 1. Includes a distribution list of all individuals with organizations who are to receive a copy of the QAPP and subsequent revisions |  |  |  |
| 1. Describes how the approved QAPP and all revisions shall be maintained on file and made available upon request |  |  |  |
| **A8. Project Organization (QA/S-2 Pages 12-13)** | | | |
| 1. Identifies individual(s) and organization(s) participating in the project |  |  |  |
| 1. Describes the QAPP approval authorities |  |  |  |
| 1. Describes the organization’s project roles and responsibilities, including the roles of:  * Senior manager * Project operations manager * Project QAO * Individual responsible for QAPP management * Titles, roles, and names (if determined during planning) of operations and quality individuals within the organization conducting or supporting EIO and their reporting relationships |  |  |  |
| 1. Identifies all contractors, subcontractors, and sub-grant recipients supporting EIO and describes their project roles and responsibilities |  |  |  |
| 1. Identifies principal EIO users within and outside of the organization |  |  |  |
| **A9. Project Quality Assurance Manager Independence (QA/S-2 Page 13)** | | | |
| 1. Describes how the Project QAO’s independence from EIO is ensured |  |  |  |
| **A10. Project Organization Chart and Communications (QA/S-2 Pages 13-14)** | | | |
| 1. Includes a project organization chart with: 2. Lines of authority, including reporting relationships 3. Lines of communication within the organization and with other organizations involved in the project |  |  |  |
| 1. Project organization chart shows the names of the organizations and all individuals identified in Element A8 |  |  |  |
| 1. Project organization chart demonstrates the project QAO’s independence from EIO, reporting relationship(s), and authority outside the supervisory chain |  |  |  |
| 1. Documents communication procedures, including timing of communication, in sufficient detail to understand the processes, roles, and responsibilities |  |  |  |
| 1. Standard procedures for communications are described or cited, including:    * + 1. Elevating discrepancies and QAPP non-conformances        2. Process improvements        3. Seeking project concurrence and approvals |  |  |  |
| **Non-EPA Organizations:** | | | |
| 1. Describes communication procedures to EPA to include elevating discrepancies and QAPP non-conformances |  |  |  |
| **A11. Personnel Training/Certification (QA/S-2 Pages 14-15)** | | | |
| 1. Identifies the individual responsible for ensuring personnel conducting EIO are qualified, trained, and experienced |  |  |  |
| 1. Identifies the individual responsible for documenting personnel training |  |  |  |
| 1. Identifies and describes any specialized training or certifications needed |  |  |  |
| 1. Describes how the training will be provided |  |  |  |
| 1. Describes assurance of the necessary skills |  |  |  |
| 1. Describes the procedure or system for documenting training records and skill evaluation |  |  |  |
| **EPA Organizations:** | | | |
| 1. Includes or references QAFAP Personnel & Training requirements |  |  |  |
| **A12. Documents and Records (QA/S-2 Page 15)** | | | |
| 1. Identifies documents and records that will be produced for the project |  |  |  |
| 1. Describes or references processes for management of documents and records, including the QAPP |  |  |  |
| 1. Includes or references applicable requirements for the final disposition of records and documents, including location and length of retention period |  |  |  |
| 1. Describes or references the system for control of documents, including preparation, review, approval, issuance, revision, and archiving |  |  |  |
| **EPA Organizations:** | | | |
| 1. Includes or references QAFAP Document Control and Records Management requirements |  |  |  |
| **B. Implementing Environmental Information Operations** | | | |
| 1. Describes all guidance, tools, and templates used to develop the QAPP |  |  |  |
| **EPA Organizations:** | | | |
| 1. Includes or references QAFAP requirements for all B elements |  |  |  |
| **B1. Identification of Project Environmental Information Operations (QA/S-2 Pages 16-17)** | | | |
| 1. Describes how the EIO is to be conducted and accomplishes the project purpose |  |  |  |
| 1. Describes how the EIO will satisfy the information/data quality objectives and performance/acceptance criteria (*reference: A4 and A6 Elements*) |  |  |  |
| **B2. Methods for Environmental Information Acquisition (QA/S-2 Pages 17-18)** | | | |
| 1. Identifies and describes the acquisition methods and procedures for EIO |  |  |  |
| 1. Identifies methods by number / identifier, version / revision date, regulatory citation; and indicates options / modifications |  |  |  |
| 1. Identifies, describes, or references SOPs used for acquisition of EIO, includes version / revision date and options / modifications |  |  |  |
| 1. Identifies or references the process for managing SOPs (e.g., individuals responsible, process for updating, accessibility to personnel) |  |  |  |
| ***Field Activities Environmental Measurements*** | | | |
| 1. Describes or references field activity procedures (e.g., information derived from tools, instruments, observational results, investigations, and sample collection) |  |  |  |
| 1. Identifies or references maximum holding times for sample extraction and/or analysis |  |  |  |
| 1. Describes or references selection and preparation of sample containers, sample volumes, and preservation methods |  |  |  |
| 1. Describes or references sample handling and custody processes |  |  |  |
| ***Laboratory Analyses*** | | | |
| 1. Identifies analytical methods by number / identifier, version / revision date, regulatory citation, and options / modifications |  |  |  |
| 1. Describes or references procedures to be conducted when a non-compliance or failure in the analytical system occurs (e.g., Laboratory QAM, SOP) |  |  |  |
| 1. Specifies the laboratory data package turnaround time needed |  |  |  |
| 1. Non-standard method application: describe method performance study information |  |  |  |
| ***Existing Information (EI)*** | | | |
| 1. Describes EI to be obtained from databases, software applications, decision support tools, websites, existing literature, etc. |  |  |  |
| 1. Describes the collection process |  |  |  |
| 1. Describes the intended use and criteria for acceptance & evaluation for suitability |  |  |  |
| 1. Indicates if the EI is to be combined with new EIO and describes the criteria to ensure compatibility |  |  |  |
| ***Environmental Technology*** | | | |
| 1. Identifies the purpose of the technology (e.g., pollution prevention, contamination containment, storage, remediation) |  |  |  |
| 1. Describes physical parameters or processes collected using environmental technologies |  |  |  |
| 1. Describes systems, devices, and components applicable to hardware and methods or techniques that measure &/or remove pollutants or contaminants &/or prevent from entering the environment[[1]](#footnote-2) |  |  |  |
| **B3. Integrity of Environmental Information (QA/S-2 Pages 18-19)** | | | |
| 1. Describes or cites procedures for ensuring the integrity of project EIO |  |  |  |
| 1. Describes or cites procedures and requirements for sample handling and custody (e.g., field logs, packaging / transport / shipment, laboratory storage) |  |  |  |
| 1. Includes examples of sample labels and chain of custody forms/sample custody logs |  |  |  |
| 1. Identifies the laboratory(ies) to be used |  |  |  |
| 1. Describes processes for ensuring laboratory accreditation and/or certification for applicable analytes and matrices |  |  |  |
| **B4. Quality Control (QA/S-2 Page 19)** | | | |
| 1. Describes the QC activities needed for each EIO to meet project environmental information/data quality objectives and performance/acceptance criteria |  |  |  |
| 1. Describes or references the frequency of QA activities, corrective actions (CA), and how the effectiveness of the CA shall be determined and documented |  |  |  |
| 1. Describes or references procedures to calculate statistics (e.g., precision, bias) |  |  |  |
| 1. Describes field / laboratory sampling QC activities (e.g., blanks, duplicates, matrix spikes, laboratory control samples, surrogates) |  |  |  |
| 1. Describes existing information QC activities (e.g., use of systematic review, independent secondary review of studies in the open literature, QC of constructed databases or spreadsheets) |  |  |  |
| 1. Describes QC activities for EIO using models or modeling (e.g., model calibration, model validation, sensitivity analyses) |  |  |  |
| **B5. Instrument/Equipment Calibration, Testing, Inspection, and Maintenance (QA/S-2 Page 19)** | | | |
| 1. Identifies instruments/equipment used for EIO (e.g., tools, gauges, and pumps) |  |  |  |
| 1. Describes procedures and documentation activities to ensure that the instruments / equipment are available / in working order |  |  |  |
| 1. Describes or references how calibration will be conducted, documented, and traceable to the instrument |  |  |  |
| 1. Describes or references how instruments and equipment will be tested, inspected, and maintained |  |  |  |
| 1. Discusses availability of critical spare parts |  |  |  |
| **B6. Inspection/Acceptance of Supplies and Services (QA/S-2 Page 20)** | | | |
| 1. Describes procedures for inspection and acceptance of supplies and services, including traceable documentation of the acceptance |  |  |  |
| 1. Identifies the individual(s) responsible for inspection/acceptance of supplies/services |  |  |  |
| 1. Specifies the vendor’s responsibilities for specific S-2 elements and verification of adherence |  |  |  |
| **B7. Environmental Information Management (QA/S-2 Page 20)** | | | |
| 1. Describes or cites the environmental information management process for the project, including from generation to final use or storage (e.g., field, laboratory, office, database) |  |  |  |
| 1. Describes or references standard record-keeping procedures, document control system, and process for information storage and retrieval on electronic media |  |  |  |
| 1. Describes or references the control mechanism for detecting/correcting errors and for preventing loss of information during data entry/reduction/reporting, and data entry to databases/forms/reports/ databases |  |  |  |
| 1. Includes or references forms or checklists to be used in these processes |  |  |  |
| 1. Describes or references procedures to process, compile, and analyze project EIO |  |  |  |
| 1. Describes or references required computer hardware/software requirements, including performance, acceptability, and assurance that applicable information resource management requirements are satisfied |  |  |  |
| **C. Assessment, Response Actions, and Oversight** | | | |
| **C1. Assessments and Response Actions (QA/S-2 Pages 21-22)** | | | |
| ***Note:*** *Assessment activities may include audits, readiness reviews, peer review, in-field data document reviews, etc.* | | | |
| 1. Describes project assessment activities, including the number, frequency, and types of planned assessments |  |  |  |
| 1. Identifies the individual(s) who will perform the assessments and how they are free of any conflicts of interest |  |  |  |
| 1. Describes the documentation of assessment findings, non-conformances, and corrective actions |  |  |  |
| 1. Describes who is responsible and how response actions associated with assessments will be developed, documented, and tracked |  |  |  |
| 1. Describes the reporting of response actions |  |  |  |
| **C2. Oversight and Reports to Management (QA/S-2 Pages 22-23)** | | | |
| 1. Identifies the individual(s) responsible for oversight activities |  |  |  |
| 1. Describes oversight activities that ensure response actions and reporting mechanisms capture the project status and any QA issues that arise during implementation and through assessments |  |  |  |
| 1. Identifies project reports to management, including content requirements, the process for submission, and distribution list |  |  |  |
| **D.**  **Elements For Environmental Information Review and Usability Determination** | | | |
| **D1. Environmental Information Review (QA/S-2 Pages 23-24)** | | | |
| 1. Describes or cites the processes for information/data verification and validation |  |  |  |
| 1. Describes or references how performance and/or acceptance criteria will be incorporated in the review process |  |  |  |
| 1. Describes or references how information/data quality indicators will be incorporated in the review process |  |  |  |
| 1. Describes the data quality assessment documentation that will occur after the EIO phase of the project is completed |  |  |  |
| 1. Identifies the individual(s) conducting each of these activities |  |  |  |
| 1. Describes the documentation and communication processes for review |  |  |  |
| **D2. Usability Determination (QA/S-2 Pages 24-25)** | | | |
| 1. Describes or references the process based on the review that determines whether the EIO is useable |  |  |  |
| 1. Describes the documentation of the usability determination |  |  |  |
| 1. Identifies the individual(s) responsible for the usability determination activities |  |  |  |
| 1. Describes the communication of any known or anticipated limitations on the use of the environmental information |  |  |  |
| **END** | | | |

1. For additional advice on QAPPs for design, construction, and operation or application of environmental technology, refer to the current version of EPA Guidance on Quality Assurance for Environmental Technology Design, Construction and Operation, https://www.epa.gov/sites/default/files/2015-06/documents/g11-final-05.pdf. [↑](#footnote-ref-2)