Directive No: CIO 2105-P-01.4

Issued by the EPA Chief Information Officer,
Pursuant to Delegation 1-19

Environmental Information Quality Procedure

1. PURPOSE

This Procedure supports the implementation of EPA's *Environmental Information Quality Policy* (CIO 2105.2). This Procedure establishes management principles and responsibilities for ensuring that EPA environmental information and technology operations products and services meet Agency quality-related requirements, are of sufficient quality for their intended use, and support EPA's mission to protect human health and the environment.

This Procedure describes Policy implementation and the governance of EPA's Quality Program. It is intended to provide a comprehensive, coordinated approach for consistent implementation of the Quality Policy to ensure the continuous improvement in the quality of EPA's environmental information and technology.

The quality tools and processes described in this Procedure are based on national and international consensus standards. They will assist the Office of Mission Support (OMS), Deputy Assistant Administrator (DAA) for Information Technology/Information Management (IT/IM) and Chief Information Officer (CIO) in overseeing the Agency's Quality Program.

2. SCOPE

This Procedure defines the minimum requirements for the Quality Program supporting EPA environmental programs that encompass the collection, production, evaluation, or use of environmental information by or for EPA and the design, construction, operation or application of environmental technology by EPA. Collectively these activities are referred to as environmental information operations.

3. AUDIENCE

The audience for this Procedure is all Agency employees responsible for environmental information operations. This includes EPA Program Offices, Regions, and their sub-organizations, hereafter referred to as EPA organizations.

This Procedure applies only to EPA organizations unless non-EPA organizations are performing work in support of EPA's mission or national program priorities as defined by and in accordance with:

- federal laws,
- regulations,
- extramural agreements, or
- performing work on a voluntary basis under agreement with EPA.

In these circumstances, this Procedure, including the need for a Quality Management Plan (QMP), will be applied to non-EPA organizations as described in the current version of:

- The EPA organizations' QMP that is sponsoring the work,
- Quality Management Plan (QMP) Standard[1], and/or
- Quality Assurance Project Plan (QAPP) Standard[2] .

Non-EPA organizations include but are not limited to:

- contractors,
- regulated parties,
- cooperative agreement holders, grantees,
- states, tribes, localities, intergovernmental organizations,
- educational institutions, hospitals, non-profits,
- as negotiated with other federal governmental agencies, and parties to Memoranda of Agreement or Understanding
- volunteer organizations,
- and other environmental information providers.

4. AUTHORITY

These citations are valid at the time of issuance of this Procedure. Since these documents are subject to periodic review, users of this Procedure should refer to the most recent version.

- U.S.C. App.; Pub. L. 98–80, 84 Stat. 2086 (Reorganization Plan No. 3 of 1970)
- National Technology Transfer and Advancement Act (NTTA) (PL 104-113)
- Clinger-Cohen Act of 1996 (PL 104-106)
- Office of Management and Budget (OMB) Circular A-130, Managing Information as a Strategic Resource
- Information Quality Act (IQA), Section 515 of Treasury and Government Appropriations Act, 2001 (PL 106-554, 31 USC 3516) (Refer to Page 114 STAT. 2763A-154)
- 1-41. Mandatory Quality Program Delegation 1200 TN 496 1-41
- 2 CFR 1500.12: Uniform Administration Requirements, Cost Principles and Audit Requirements for Federal Awards, Quality Assurance
- 40 CFR Part 35: State and Local Assistance
- 48 CFR Part 46: Quality Assurance

5. PROCEDURE

This Procedure outlines EPA's Quality Program requirements to support EPA's mission to protect human health and the environment and to ensure environmental information

[1] *The current version of this document is available at https://www.epa.gov/irmpoli8/quality-management-plan- qmp-standard*
[2] *The current version of this document is available at https://www.epa.gov/irmpoli8/quality-assurance-project-plan-qapp-standard*

operations are of known and documented quality for their intended use(s). It defines the DAA for IT/IM/CIO's role in leading the Agency Quality Program and recognizes and builds upon existing environmental information operations quality-related policies, procedures, and activities implemented across the Agency. This Procedure ensures a comprehensive and coordinated approach for consistent implementation of continuous improvement in the quality of EPA's environmental information operations. Also, all environmental information operations performed for the Agency must comply with this Procedure as described in Section 3. Audience.

This Procedure requires EPA organizations to develop, implement, and maintain a Quality Program. Each EPA organization covered by the scope of this Procedure must:

A. Assign a Quality Assurance Manager (QAM). The title of this position may vary by organizational structure [e.g., Director of Quality Assurance (DQA) or Regional Quality Assurance Manager (RQAM]. For this Procedure, this position will be referred to as the Quality Assurance Manager (QAM). Organizations should identify and assign a QAM. The QAM must have Quality Management expertise, and the authority to conduct independent oversight of the organization's Quality Program. They will report on quality issues to senior managers having executive leadership authority for the organization. Refer to Section 7, Roles and Responsibilities, for a list of activities to be performed by QAMs or their designees. QAM designee and delegated responsibilities are identified in the organization's QMP.

Each EPA QAM will have their role specified in their position description and will have their responsibilities documented in their Performance Appraisal and Recognition System (PARS).

The QAM authority is independent of environmental information operations. The operations manager (e.g., program manager) will not have authority to sign quality assurance (QA) documentation for the QAM, nor will the QAM have authority to sign QA documentation for the operations, project or program manager unless delegated in the organization's QMP. Even if delegated in the EPA organization's QMP, EPA approval of QMPs and QAPPs cannot be signed for both quality and operations by the same person. The two functions, QA and operations, must remain independent; however, in small organizations outside of EPA (e.g., small tribal departments), these two functions may be combined with approval from the EPA QAM.
If senior leadership does not directly supervise the QAM, the QAM must have authority to access and discuss quality-related issues with their organization's senior leadership outside of their direct supervisory chain as necessary.
Delegation of authority to the QAM from their management must be documented in the QMP to include redelegation.

B. Develop a Quality Management Plan (QMP). Describe and document their Quality Program in a QMP consistent with the current version of the Quality Management Plan (QMP) Standard. The QMP describes the organization's Quality Program. It documents how the organization structures its Quality Program and describes its quality policies and procedures; criteria for and areas of application;

and roles, responsibilities, and authorities. It also describes an organization's policies and procedures for implementing and assessing the effectiveness of the Quality Program. The QMP must document all technical activities to be performed under the Quality Program and how the program will integrate QA and quality control (QC) procedures and plans into all its environmental information operations. The QMP must include provisions for dispute resolution to include technical and management systems disputes. Approval of an EPA organization's QMP requires signatures by their executive leadership and senior management. The DAA for IT/IM/CIO will then approve and sign the organization's QMP on behalf of OMS. The DAA for IT/IM/CIO may redelegate this authority as defined in the current version of 1-41. Mandatory Quality Program.

Each Agency organizational unit governed by the Quality Procedure shall document its Quality Program in a QMP.

When preparing QMPs, organizations shall adhere to QMP development and content requirements found in the current version of the Quality Management (QMP) Standard.

The QMP Standard describes the quality management practices and QMP elements that are normally considered to be critical to an effective Quality Program. If the QMP preparer determines that additional quality management elements are useful or necessary for an adequate Quality Program, these elements shall be developed and discussed in the QMP.

When addressing the planning requirements of the Quality Management Plan (QMP) Standard, each organization shall determine content requirements for Quality Assurance Project Plans (QAPPs) that best suit its needs by project type and document that determination. This Procedure authorizes the EPA organization sponsoring the work to determine the guidance or tools for QAPPs suitable where projects do not readily fit in the structure or described contents of the current version of the *Quality Assurance Project Plan Standard*.

All QMPs shall be approved and signed by senior management of the organization, as described in the QMP Standard. EPA organizations shall submit their QMPs to the EPA Enterprise Quality Management Division (EQMD) for review and approval. Non- EPA organizations shall submit their QMPs to the EPA official responsible for the work, as described in the QMP Standard. All organizations required to have a QMP shall review their QMP at least annually to confirm the suitability and effectiveness of the approved quality management practices.

In general, a copy of any QMP revision(s) made during the year should be submitted to the approving authority as a report when such changes occur. However, if significant changes have been made to the quality program that affect the performance of work, it may be necessary to re-submit the entire QMP for re-approval. Conditions requiring the revision of an approved QMP include:

- expiration of the five year life span of the QMP;

- major changes in mission and responsibilities, such as changes in the delegation status of a program;
- re-organization of existing functions that affect programs covered by the QMP; and
- assessment findings requiring corrective actions and response.

Refer to paragraph I, Conduct Reporting, of this Procedure for information on tracking QMPs. When EPA QMPs are submitted to EQMD for review and approval, EQMD shall track receipt, review, and approval of the QMP. EQMD also shall use this information to facilitate reporting metrics as part of the Agency-wide Quality Program Management Reviews described in paragraph I of this Procedure.

When extramural QMPs are submitted to EPA organizations, the EPA QAM shall track and report receipt, review, and approval of the QMP.

C. Provide for Resources. Ensure resources are available to implement the Quality Program as defined in their QMP, including QA resources required for extramural activities in support of EPA. The Senior Manager having executive authority in the organizations is responsible for providing resources. Resources are knowledgeable personnel, funding, materials, supplies, and time.

D. Conduct Systematic Planning. Document the processes for systematic planning and use them to develop acceptance or performance criteria and to perform all environmental information operations.

Organizations shall use a systematic planning process for environmental information operations that is based on the scientific method. The planning process shall be based on a common sense, graded approach to ensure that the level of detail in planning is commensurate with the importance and intended use of the work and the available resources. Elements of a systematic planning approach that shall be documented include:

- Identification and involvement of the project manager, sponsoring organization and responsible official, project personnel, stakeholders, scientific experts, etc.;
- Description of the project goal, objectives, and questions and issues to be addressed;
- Identification of project schedule, resources (including budget), milestones, and any applicable requirements (e.g., regulatory requirements, contractual requirements);
- Identification of the type of information needed and how the information will be used to support the project's objectives;
- Determination of the quantity of information needed and specification of performance criteria for measuring quality;
- Description of how, when, and where the information will be obtained (including existing information) and identification of any constraints on information collection;

- Specification of needed QA and QC activities to assess the quality performance criteria (e.g., QC samples for both the field and laboratory, audits, technical assessments, performance evaluations, sensitivity analysis of models, etc.);
- Description of how the acquired information will be analyzed, evaluated (i.e., QA review, validation, verification), and assessed against its intended use and the quality performance criteria.

To the extent possible, the systematic planning process shall ensure that all organizations and/or parties who contribute to the quality of the environmental project or use the results are identified and that they participate in this process. The planning process should include the "stakeholders" (e.g., decision makers, information producers, gatherers, and users) to ensure that all needs are defined adequately at the outset and that the planning for quality addresses the specific needs defined.

EPA has developed a systematic planning process called the Data Quality Objectives (DQO) Process. While not mandatory, this process is the recommended planning approach for many EPA information collection activities and is described in *Guidance on Systematic Planning using the Data Quality Objectives Process,* QA/G-4[3].

E. Prepare Quality Assurance Project Plan Documentation. The QAPP or equivalent document (in this Procedure referred to as QAPPs) is a critical planning document for environmental information operations since it documents how environmental information operations are planned, implemented, documented, and assessed during the life cycle of a program, project, or task.

All work performed by or on behalf of EPA involving environmental information operations shall be implemented in accordance with an approved QAPP. All QAPPs shall be approved as described in the current version of the QAPP Standard. EPA QAMs, as defined by the organization's QMP, review and approve QAPPs for all applicable environmental information operations projects prior to any information gathering work, or use, except under circumstances requiring immediate action to protect human health and the environment or operations conducted under police powers.

Some organizations include technical or peer review as part of the QAM's responsibilities; however, technical comments are under the authority of the Project Manager (PM) or equivalent. The signature of the QAM may not be withheld based on technical comments unless their comments will impact the QA of the project.
Signature authority delegated to the QAM is described in the current versions of the Environmental Information Quality Policy, QAPP Standard, or as prescribed by the QMP of the EPA organization sponsoring the work.

[3] *The current version of this document is available at https://www.epa.gov/quality/guidance-systematic-planning-using-data-quality-objectives-process-epa-qag-4*

Review of all QAPPs annually. All QAPPs shall be valid for a maximum period of five years from the approval date. After five years, the QAPP must be revised, reissued, or closed out. Any changes to approved documents shall comply with the procedures used for the original review and approval.

Document the output of systematic planning in QAPPs and approve them for use. Detailed information for QAPP development is provided in the current version of EPA QAPP Standard, or in other tools or guidance developed by organizations to support development of QAPPs for projects as required.

The QAPP Standard presents specifications on the information that must be addressed in a QAPP for environmental information operations performed by or on behalf of EPA. These specifications as presented in the QAPP Standard are known as QAPP elements.

These elements represent the information generally required for many operations involving the characterization of environmental processes and conditions.

Because of the diversity of Agency programs, some elements described in the QAPP Standard may not be applicable to all programs or there may be additional requirements. The final decision on the applicability or use of any or all these elements for QAPPs shall be made by individual EPA organizations. Each EPA organization may tailor these requirements in its own implementation documents (e.g., QMP, guidance documents, standard operating procedures (SOPs), templates, etc.) to better fit specific needs.
Further discussion of this tailoring is in the current version of the QAPP Standard.

F. Develop Directives. Develop, maintain, or adopt and implement for your organization appropriate Quality Program related policies, procedures, standards, and guidance pertaining to all environmental information operations.

Describe in the QMP or a procedure how appropriate measures for controlling the release, change, and use of planning documents are implemented. These measures provide for the necessary approvals, specific times for implementing changes, and verification that the changes are made as prescribed. Changes to but not administrative updates of approved documents must comply with the procedures used for the original review and approval.

To assure consistency in common procedures, standard operating procedures (SOPs) are encouraged for appropriate routine, standardized, or special/critical operations. The QMP or existing document control document shall contain the organization’s process for identifying the need for SOPs, the process for developing SOPs, and the policy for using SOPs. The QMP shall also describe the process by which SOPs are reviewed for initial and subsequent use.

Standard Operating Procedures (SOPs) contain mandatory, minimum specifications or processes for use by EPA and non-EPA organizations that must comply with Agency- wide Quality Program directives. An SOP is a set of step-by-step instructions compiled by the organization to assist staff with complex routine

technical and quality operations. SOPs aim to achieve efficiency, quality output, and uniformity of performance while reducing miscommunication and failure to comply with directives.

The EQMD shall develop quality management practices and tools for use Agency-wide to enable effective planning, implementation, documentation, and assessment of individual Quality Programs. EQMD produces the following types of documents for this purpose:

- Directives — Documents that contain mandatory, minimum specifications or procedures for use by all EPA organizations and non-EPA organizations that have a written agreement with EPA requiring compliance with Agency-wide Quality Program directives.

- Guidance Documents — Guidance documents contain non-mandatory guidelines for use by EPA and non-EPA organizations in implementing quality management practices or QA and QC activities. Such documents often provide suggestions on how to meet specifications given in directives.

All Agency-wide Quality Program directives shall be valid until formally rescinded or revised. After five years from the approval date, some action must be taken to reaffirm the document's validity, revise it, or delete it from the Agency-wide Quality Program. Changes to but not administrative updates of approved documents must comply with the procedures used for the original review and approval.

Additional user-specific QA and QC directives, guidance, and SOPs that are tailored to an organization and its mission may be appropriate given the diversity of Agency programs. For the purposes of this Procedure, "user-specific QA and QC guidance and procedures" includes but is not limited to written documents, computer software, and videos (if used to provide instructions). Such procedures, instruction, or guidance will either be developed or adopted by the organization and be consistent with Agency directives and the organization's QMP.

Management shall ensure that all changes to the guidance and SOPs are available to all personnel using that guidance, including active contractors and assistance agreement recipients (e.g., grantees, cooperative agreement holders).

G. Execute Assessments. Plan, conduct, and document assessments annually to provide information on the effectiveness of the Quality Program. Quality processes are updated based on the results of these assessments.

The QMP shall describe the management commitment and approach to assessing its Quality Program. The process(es) for assessments may be in the QMP and/or in referenced Standard Operating Procedures (SOPs) that are readily available.

Describe the frequency of assessments, and how and by whom assessments of environmental information operations programs are planned, conducted, evaluated, and documented. Describe the process by which management in

conjunction with the QAM chooses an assessment tool, and the expected frequency of their application to environmental information operations. Available assessment tools include but are not limited to data quality assessments (DQA); Quality Program Management Reviews (QPMRs); peer, technical, and readiness reviews; performance evaluations; technical systems audits; laboratory competency assessments; and surveillances.
Discuss or address the following items pertaining to management system and technical assessments:

- How the process for the planning, scheduling, and implementation of assessments works, as well as how the organization shall respond to needed changes;
- Responsibilities, levels of participation, and authorities for all personnel and staff participating in the assessment process; and
- How, when, and by whom actions shall be taken in response to the findings of the assessment, and how the effectiveness of the response shall be determined.

Describe how the level of competence, experience, and training necessary to ensure the capability of personnel conducting assessments are determined. Personnel conducting assessments shall be qualified, based on project-specific requirements, to perform the assigned assessment. Management is responsible for choosing the assessors, defining acceptance criteria, approving assessment procedures and check lists, and identifying goals prior to initiation of an assessment. Assessors shall be technically knowledgeable with no real or perceived conflict of interest. If the assessors are chosen from within the organization, they must have no direct involvement or responsibility for the work being assessed, except for self- assessments.

Describe how personnel conducting assessments shall have authority, access to programs and managers, access to documents and records, and organizational freedom to:

- Identify quality issues;
- Identify and cite noteworthy practices that may be shared with others to improve the quality of their operations products and services;
- Propose recommendations for resolving quality issues; and
- Independently confirm implementation and effectiveness of solutions.

Discuss conditions under which a “stop work” order may be needed and when and how authority for such decisions shall be made.

Describe the roles and responsibilities of management and staff for documenting, reporting and reviewing assessment results. Describe the type of assessment findings (e.g., conformance, nonconformance, opportunity for improvement, commendation) that may be used and the appropriate response to each one. The organization shall base findings on objective evidence and shall retain the documented information as part of quality records.

Hold Quality Program Management Reviews. Plan, conduct, and document management reviews of the Quality Program in accordance with the procedures described in the organization's QMP to assess its effectiveness and institute improvements. Annual performance of these reviews and timely action on the results demonstrate senior management's commitment to implementation of the Quality Program in accordance with the procedures described in the organization's QMP.

Annually, senior management or as delegated, must review, assure, and document the organization's Quality Program to confirm its continuing suitability, adequacy, and effectiveness. This management review process must be described in the QMP to include delegation. The management review must include consideration of:

- The status of actions from previous management reviews;
- Changes in external and internal issues that are relevant to the Quality Program;
- Information on Quality Program performance, including trends in:
    - Nonconformities and corrective actions;
    - Assessment results, and opportunities for improvement; and
- Suitability of Policies and SOPs.

The outputs of the management review shall include decisions related to continuous improvement opportunities and any need for changes to the Quality Program. The organization must retain documented information as evidence of the results of management reviews.

H. Identify Corrective Actions and Improvements. Perform and document corrective actions and improvements.

Describe in the QMP or SOP how management shall respond to the results (or findings) and recommendations from assessments in a timely manner. When conditions needing corrective action are identified, describe how the appropriate response must be promptly made. Corrective actions shall include the identification of root causes of problems, the determination of whether the problem is unique or has systemic implications, and action(s) to prevent recurrence. As part of the corrective action, indicate how follow-up actions shall be taken and documented to confirm the implementation and effectiveness of the response action.

Describe how disputes because of assessments (if encountered) are addressed and by whom.

The QMP or SOP must describe how staff at all levels are encouraged to identify and establish communications, identify process improvement opportunities, and identify issues.

I. **Conduct Reporting.** Report annually QA/QC activities for the previous fiscal year (FY) and those activities planned for the upcoming FY to the CIO. Submit this information as described in this procedure and the annual reporting data call from the CIO. This reporting of QA activities provides EPA managers access to information that summarizes the results of having implemented the Quality Program. EQMD will provide a summary report to the CIO who will release the report to Agency senior leadership and the QA Community.

This reporting may be used:

Organizationally to:

1. identify limited changes or updates to the organizations' approved QMP, and
2. provide helpful information to management by documenting the past fiscal year's activities and estimating the current year's workload based on the prior year and the expected activities in the current year.

Programmatically to:

1. Provide senior management and other stakeholders with information on the implementation of the Agency-wide Quality Program.
2. Evaluate challenges related to QA identified by EPA organizations to identify systemic or Agency-wide problems and initiate plans to address them.

QA information will be annually reported to EQMD, for example:

1. QA course listing, training supplier, total attending and date of training
    - Training Attended
    - Training Conducted
2. Total Number of QA Assessments
3. Total Number of QMPs received for review and/or approval
4. Total Number of QMPs approved
5. Total Number of all QAPPs received for review and approval
6. Total Number of EPA approved QAPPs
    - Internal QAPPs Total
    - External QAPPs Total
        - Number of non-state and tribal QAPPs, received for review and approval
        - Number of non-state and tribal QAPPs reviewed and approved
        - Number of state and tribal QAPPs received for review and approval. This is applicable only to Regions.
        - Number of state and tribal QAPPs (each month) reviewed and approved by EPA within 60 days (EPA time only). This is applicable only to Regions.
7. Information included in the Workplan will be targeted and may change each FY. This information will be included in the CIO's data call memorandum.

In addition, EQMD will report on the following QA activities:

1. Assessments performed by EQMD and date

2. Number of QMPs received
3. Number of OMS approved QMPs with 45 days
4. Number of implemented corrective actions/number of findings identified
5. Number of IQG Request for Correction (RFCs) received
6. Number of RFCs responded to within 120 days
7. Number IQG Request for Reconsideration (RFRs) received
8. Number RFRs responded to within 120 days

J. Evaluate information using the Information Quality Guidelines (Pre-Dissemination Review).

Plan for and assess all environmental information prior to use in supporting Agency actions or decisions to verify the information is of sufficient quality, objectivity, utility and integrity for their intended use and purpose.
Ensure information disseminated by or for EPA conforms with the *Guidelines for Ensuring and Maximizing the Quality, Objectivity, Utility and Integrity of Information Disseminated by the Environmental Protection Agency*[4] (IQG) criteria by evaluating the following, as applicable, during pre-dissemination review:

- Was the information collected under an Agency-approved Quality Program? Is there an approved, current Quality Assurance Project Plan supporting the information?
- Was EPA's *A Summary of General Assessment Factors for Evaluating the Quality of Scientific and Technical Information*[5] considered in determining and documenting the quality and relevance of the information used?
- Did information generated by or for EPA undergo appropriate peer review, in accordance with the Agency's peer review policy and guidance?
- Has information that is presented from third-party sources (e.g., states, tribes, other federal agencies, grantees) been subject to and collected under EPA's Quality Program? If not, is the information of known quality? Did the information undergo peer review? If EPA did not adopt or endorse the information, is it appropriate to include a disclaimer indicating that EPA does not endorse the information?
- Does statistical or numerical information (including performance measurement data appearing in text or tables) include a characterization of statistical confidence and/or distribution, as appropriate?
- Is there an adequate discussion of, or reference to, the suitability of the data for their use in the information product?

Ensuring Transparency—Sources of factual statements, data, statistics, tables, charts, figures, and analytical methods should be described or referenced. In

[4] *The current version of this document is available at: https://www.epa.gov/quality/guidelines-ensuring-and- maximizing-quality-objectivity-utility-and-integrity-information*
[5] *The current version of this document is available at: https://www.epa.gov/sites/production/files/2015-01/documents/assess2.pdf*

general, references should be provided for the following kinds of information:

- Significant and original statements.
- Not commonly known, recognized, or located.
- Controversial matters and opposing views.
- Data, methods, models, calculations and statistics, tables, charts, etc.
- Reports, studies, protocols, guidance, regulations, laws, etc. to which the information product refers.

Ensuring Reproducibility of Influential Information—Supporting data, models, methods, statistical/analytic procedures, assumptions employed, and calculations for influential information (as defined in the IQGs) are adequately described and/or referenced and are available to facilitate the reproducibility of the information by qualified third parties. References provided (for example in the text or in a footnote) should enable the public to access this information.

K. Document Quality Program Requirements for Intramural (Internal) Projects and Extramural Agreements.

EPA organizations shall identify projects and extramural agreements that may be subject to the Quality Program Policy and Procedure and document this determination. For projects that are identified, document the approval of Quality Program documentation and strategies needed to support the objectives.
Below is the information as related to the quality of intramural and extramural projects:

Intramural (Internal EPA) Projects

- An EPA project manager (PM), or equivalent, who is responsible for planning and managing internal EPA projects shall document the broad QA requirements necessary to support any environmental information operations that will be performed under the project. The Project Manager shall submit the documentation to their QAM (or designee) for review and approval, along with supporting documents that describe the goals of the project and the environmental information operations that will be performed (e.g., study plan, charter, memo).
- The documentation (e.g., QAPP) provides confirmation that the appropriate QA and QC requirements have been determined. It also communicates whether quality requirements are necessary and, if so, which quality standards should be applied for activities that involve the collection, production, evaluation or use, or reporting of the environmental information, and/or environmental information operations.

Extramural Projects

- Specific QA requirements must be included in the procurement or financial assistance documents (e.g., contract, work assignment, task order or delivery order statements or scopes of work (SOW) and performance work statements (PWS), applications for assistance, funding requests, and purchase requests) that will be issued (e.g., contractor, interagency agreement partner). Accordingly, the EPA QAM (or designee)

in collaboration with the operations personnel (PO/PM/COR) must review the supporting documents to confirm the need for the QA requirements specified, verify that those requirements have been appropriately communicated to the organization in the corresponding documents and provide any special language or conditions necessary for the QA requirements.

- If the document undergoes revision, the EPA QAM (or designee) in collaboration with the operations personnel (PO/PM/COR) must review the revised document to ensure that revision has not necessitated a change in the QA requirements or special language; if it has, they must adjust those accordingly.

Contracts—Requirements for QA and QC activities in contracts are given in 48 CFR 46 and in the EPA Acquisition Guide (EPAAG).
For contracts, a Quality Assurance Review Form (QARF) shall be used and it may be used with other types of extramural agreements. Refer to the definition for exceptions.

A QARF is an internal EPA form that provides a means for EPA:

- QAMs (or designees) to identify, track, and report on individual projects that are subject to the Agency's Quality Program requirements;
- Project Managers (PMs), Contract Officer Representatives (CORs), and Project Officers (POs) to broadly describe the quality management strategies they intend to employ for the projects they are responsible for managing or overseeing;
- QAMs (or designees) and Managers to review and document their concurrence with those strategies; and
- National Program Offices (NPOs) and Regions to communicate the approved quality management strategies to officials responsible for executing extramural agreements.

As stated in Federal Acquisition Regulation (FAR) 46.202-4, higher-level quality requirements are those that apply to complex or critical items, or that are used when the technical requirements of the contract require control of such things as work operations, in-process controls, and inspection, or attention to such factors as organization, planning, work instructions, documentation control, and advanced metrology.

For EPA, this type of quality requirement will apply to the collection, generation, use, or reporting of environmental information. The requirements and specifications in this Procedure extend to all contract forms involving environmental information.

Accordingly, approved QARFs are required for all solicitations, all PWSs or SOWs for contracts, work assignments, task orders and delivery orders, and for any modifications to existing work assignments, task orders, and delivery orders that involve a significant change to the PWS/SOW. Actions that do not affect the work performed by the contractor (e.g., incremental funding or time extensions) do not require a QARF. As permitted in the EPA organization's QMP, the QARF may not be required if technical direction is issued under a project specific task order.

Office of Acquisition Services officials are responsible for incorporating the necessary standard clauses or conditions into EPA contracts to assure that minimum specifications for compliance with EPA policy are met. The specific SOW (or equivalent) may include additional QA/QC specifications identified by the COR and approved by the organization's QAM as described above. Since not all contract work assignments, delivery orders and task orders involve environmental information operations, QA/QC specifications may not be necessary. The QARF attached to the contract, work assignment, delivery order or task order shall clearly identify whether QA/QC specifications are required and what they are.

Assistance Agreements—The requirements and specifications set forth in this Procedure extend to all assistance agreements involving environmental information operations, including but not limited to grants and cooperative agreements.

Interagency Agreements—EPA cannot unilaterally require other federal agencies to comply with Agency-wide Quality Program requirements for interagency agreements funded by EPA. Instead, QA/QC requirements for interagency agreements must be negotiated between EPA and the other agency. When agreement is reached on the QA/QC specifications, the specifications must be included in the agreement.

When EPA receives funding from another agency through an interagency agreement, the EPA QA/QC requirements shall apply in addition to any specifications provided by the funding organization. If the funding Agency does not specify any requirements, EPA QA/QC requirements given by the Quality Policy and this Procedure shall apply. If the funding agency does not require EPA QA/QC requirements, the exceptions must be defined in the agreement.

EPA organizations shall identify if projects are subject to the Quality Policy and Procedure and document this determination. For projects that are, identify the strategies needed to support the project objectives. This documentation shall describe the QA/QC requirements established in each interagency agreement and shall be routed to the EPA organization's QAM for review and approval before the agreement is fully executed. This requirement applies to all interagency agreements, as it provides a means for:

- Identifying, tracking, and reporting on agreements that are subject to the Agency's Quality Program and
- Documenting that the organization's QAM has approved the negotiated QA/QC strategies specified within the agreement.

L. Address Field Activities. Describe how the organization's Quality Program is applied to sampling and non-sampling field activities and use the process described in the current version of the *EPA QA Field Activities Procedure*[6].

[6] *The current version of this document is available at https://www.epa.gov/irmpoli8/epa-qa-field-activities-procedures*

M. Address Environmental Information Quality Issues. For identified laboratory environmental information quality issues, other than fraud, use the CIO notification process described in the current version of the *CIO Notification for Environmental Data Quality Issues Procedure*[7].

N. Conduct Training. Require appropriate training for all personnel to assure that QA and QC responsibilities and requirements of the Quality Program are understood. Organizations shall state their policy and procedures regarding training for management and staff in their QMP. They shall describe the processes and the management and/or staff that are responsible for:

- Identifying statutory, regulatory, or professional certifications that may be required to perform certain operations;
- Identifying, designing, performing, and documenting technical, quality, and project management training; and
- Describing how staff proficiency in critical technical disciplines is maintained and documented.

O. Review Reports. Published Agency reports containing environmental information shall be accompanied by a readily identifiable section or appendix that discusses the quality of the data and any limitations on the use of the data with respect to their original intended application. Published EPA reports include those reports printed by the Government or distributed through publication services to the general public. This requirement does not apply to papers, journal articles, etc., that undergo peer review processes external to EPA.

Agency reports shall be reviewed in accordance with the process described in the organization's QMP before publication to ensure that an adequate discussion of QA and QC activities is enclosed. Adequacy is a subjective determination that should be based on the nature of the environmental data operations performed and the intended and likely use of the data by others, or on the objectives of the study. The purpose of the review is to ensure that sufficient information is provided to enable a knowledgeable reader to determine if the technical and quality goals were met for the intended use. Reports should include applicable statements regarding the use of any environmental information presented as a caution about possible misuse of the information for other purposes.

P. Assess environmental information. When used to support Agency decisions or for purposes other than the original intent, an assessment will be performed to verify that the environmental information is of sufficient quantity and adequate quality for the intended use. This assessment should provide an evaluation of how, when, and where the information was obtained and identify any constraints on use of the information.

[7] *The current version of this document is available at https://www.epa.gov/sites/production/files/2020-08/documents/cio_notificaton_for_environmental_data_quality_issues_procedure.pdf*

6. ROLES AND RESPONSIBILITIES

EPA Administrator: Promotes and ensures quality is an integral part of the Agency's mission by assuring that environmental information operations supporting EPA's programs and activities are of known and documented quality, scientifically valid, legally defensible, and appropriate for the intended use. The Administrator may re-delegate the responsibilities for this Procedure to Assistant Administrators (AA) and Regional Administrators (RAs).

Assistant Administrators (AA) and Regional Administrators (RA): Each AA and RA is responsible for the following QA activities:

- Implementing this Procedure in the context of the organization's specific mission;
- Ensuring that adequate resources are devoted to QA activities to ensure compliance with EPA's QA directives, to support the organization's mission and to fully implement the organization's approved QMP;
- Ensuring that the organization's QMP includes activities that will help assure the quality of the information the organization collects, manages, or uses in carrying out its mission;
- Providing reasonable assurance and certifying annually to the DAA for IT/IM/CIO that their organization has implemented EPA's Environmental Information Quality Policy and have internal controls in place to ensure that environmental information produced and utilized is of known and documented quality for the intended use. Provide this certification along with the organization's QA annual report to the Enterprise Quality Management Division (EQMD). The AA/RA may re-delegate the responsibilities for certification to the appropriate manager or supervisor. Refer to Appendix B for a copy of this certification; and
- Promoting continuous improvement in QA activities across the organization.

Office of Mission Support (OMS), Deputy Assistant Administrator (DAA) for Information Technology/Information Management (IT/IM)/Chief Information Officer (CIO): Acts as the EPA Senior Management Official for quality management and leads Agency-wide implementation of this Procedure and EPA's Quality Program. Informs AAs, RAs, and the SAC of any issues related to the quality of Agency environmental information and environmental information operations encompassed by this Procedure.

Chief Information Officer's (CIO's) Strategic Advisory Council (SAC): Consisting of Senior Information Officials (SIOs) and other senior managers, the SAC advises and reports to the DAA for IT/IM/CIO on Agency-wide environmental information operations. The SAC serves as a forum to discuss coordination of cross-cutting Agency quality-related issues.

Senior Information Officials (SIOs): Oversee effective implementation, coordination, and management of the organization's Quality Program for environmental information operations. Located in each Program Office and Region, SIOs report to the Agency

DAA for IT/IM/CIO on quality-related issues.

National Program Office Directors: Provide Program direction to the Regional Program Office Directors on National Program Office quality assurance guidance.

Mission Support Division Directors (MSDDs): Manage issues related to information technology and information management (IT/IM). Support the Region's Quality Program and coordinate with Laboratory Services and Applied Science Division Directors (LSASDDs).

Laboratory Services and Applied Science Division Directors (LSASDDs): Serve as Director of a Regional Division with oversight of the Regional Quality Program through direct management oversight of the Regional QA personnel including the Regional QAM (RQAM). Through this oversight the LSASDD ensures conformance with this Policy and Regional QMPs.

Science and Technology Policy Council (STPC): Serves as a mechanism for addressing EPA's science policy issues that go beyond regional and program boundaries, with a goal of integrating policies that guide Agency decision-makers on their use of scientific and technical information.

The STPC is an executive level council that is chaired by the Agency Science Advisor, and provides a venue for identifying, coordinating, and, when appropriate, establishing consensus for high priority, cross-agency science and technology policy issues to assist Programs and Regions. It focuses on issues that require high-level action and are relevant to the Regions and Program Offices (such as: Peer Review, Public Access, and Risk Assessment).

Office of General Counsel and Offices of Regional Counsel: Provide legal advice on issues related to environmental information operations.

OMS, Office of Records, Administrative Systems and eDiscovery (ORASE) and Enterprise Quality Management Division (EQMD) Directors: Serve as Office and Division Directors respectively and are responsible for oversight of the Agency's Quality Program. Execute actions on behalf of the DAA for IT/IM/CIO according to Delegation 1-41. Mandatory Quality Program.

EPA Quality Assurance Managers (QAMs) or designee: Have delegated authority for the management of the Quality Program as described in their organization's QMP. The QAM roles and responsibilities below serve as a reference to assist the QAM in identifying activities and best practices. These activities and best practices are applicable to their organizations and may assist in continuous improvement. These activities are not provided as performance measures for the organization but may be used to guide the QAM in discussion with management on their roles and expectations for implementing the Quality Policy and Procedure. These roles and responsibilities focus on managing quality for environmental information and technology programs.

QAMs are individuals within the organization who are assigned specific quality

management duties and are delegated authority for quality management as defined in the organization's QMP. Organizations may re-delegate the QAM's responsibilities as described in their QMP. The functions of the QAM or designee may be totally related to Quality Program activities or may be in conjunction with other functions and responsibilities within the organization. If these personnel have other functions to perform, there should be no conflict of interest. It is the QAM's responsibility to determine whether a conflict of interest exists.

Specific duties and responsibilities shall include:

- Facilitating QMP development and approval by the organization and preparing updates to the approved QMP;
- Representing the organization on matters pertaining to quality management and QA and QC activities;
- Providing expert assistance to the staff in the organization on QA and QC policies, requirements, programs and procedures applicable to procurement and technical activities;
- Reviewing QAPPs and, if applicable, QMPs for all projects, work assignments, delivery orders, task orders, grants, cooperative agreements, and interagency agreements involving environmental information operations that are performed by or on behalf of EPA;
- Approving all QAPPs for implementation in all applicable projects, work assignments, delivery orders, task orders, grants, cooperative agreements, and interagency agreements performed on behalf of EPA;
- Coordinating the correction of deficient QAPPs with the author(s) and their management including, as applicable, EPA authors, the COR, or the PO;
- Identifying QA and QC training needs for the organization;
- Providing oversight of QA and QC implementation in the environmental programs conducted by or for the organization;
- Performing assessments of environmental programs and confirming the effectiveness of corrective actions;
- Managing the day-to-day implementation of the mandatory Quality Program;
- Acting as liaison between the organization and EQMD on matters of QA requirements;
- Coordinating with senior management regarding changes to the Quality Program as needed to assure its continued effectiveness and assisting in reporting the results to EQMD;
- Managing organization resources designated for the Quality Program;
- Maintaining records of pertinent Quality Program activities performed by the organization;
- Reviewing environmental information products (i.e., project reports containing environmental information or reporting the results of environmental information activities), independently (i.e., by others than those who produced the information or the reports) to confirm that the information is presented correctly; and
- Preparing reports approved by management prior to release, publication, or distribution.

The QAM or designee roles and responsibilities reflect the activities that support systematic planning and life cycle management of EPA's environmental information operations products and services. Criteria for success are the organization executive management endorsement of quality, sufficiency of quality resources, and empowerment/authority of the QAM to oversee the organization's Quality Program. The list above does not prescribe the roles of management, but instead presents them from the perspective of the QAM. Executive management actions and support are needed for success. The QAM is to be aware of the support needed by the organization and can communicate those needs to management.

Agency Personnel: Perform work associated with environmental information operations as identified in their organization's QMP.

Recipients of Extramural Agreements: Perform all environmental information operations in accordance with this Policy's requirements as defined by federal laws, regulations, and as defined in their extramural agreements. The agreement terms and conditions may also specify applicability of the EPA lead organization's QMP.

7. RELATED INFORMATION

These citations are valid at the time of issuance of this Procedure. Since these documents are subject to periodic review, users of this Procedure should refer to the most recent version.

OMS Links:

- Environmental Information Quality Policy
- EPA QA Field Activities Procedure
- CIO Notification Procedure for Environmental Data Quality Issues
- Guidelines for Ensuring and Maximizing the Quality, Objectivity, Utility, and Integrity of Information Disseminated by the Environmental Protection Agency
- Enterprise Architecture Policy
- Data Standards Policy
- Enterprise Data Management Policy
- Quality Management Plan (QMP) Standard
- Quality Assurance Project Plan (QAPP) Standard

Other EPA/External Links:

- ASQ/ANSI E4, *Quality management systems for environmental information and technology programs—Requirements with guidance for use* (2014)
- U.S. EPA Scientific Integrity Policy
- U.S. EPA Peer Review Handbook

8. DEFINITIONS

While this Procedure uses multiple sources as the foundation for the terms defined, ASQ/ANSI E4 (2014) and CIO 2105.1 serve as primary references. The intent of this

Procedure is to ensure consistency with these primary references and to make modifications where necessary to be applicable to the Agency.

Assessment—The evaluation process used to measure the performance or effectiveness of a system and its elements. As used here, assessment is an all-inclusive term used to denote any of the following: audit, performance evaluation, management review, peer review, inspection, surveillance, or readiness review (including competency assessment, pre-award assessment of proposals, or technical assessment), peer consultation, product review (e.g., data inspection, software testing, pre-dissemination review, or review of contractor deliverables).

Audit—A systematic and independent examination to determine whether quality activities and related results comply with documented planned arrangements and whether these arrangements are implemented effectively and are suitable to achieve objectives.

Consensus Standards—Standards that are developed and adopted by achieving agreement with all affected parties. These standards are developed in accordance with procedures used by the International Organization for Standardization or organizations accredited by the ANSI.

Data—A quantitative or qualitative representation of values, facts, observations, or ideas in a formalized manner capable of being transmitted, processed, stored, analyzed, interpreted, and/or communicated by some process, whether on paper or in electronic form.

- **Qualitative data**—is descriptive.
- **Quantitative data**—is numerical.
- **Primary data**—are data observed, collected, or generated directly for a specific purpose.
- **Existing data**—are data that have been collected, derived, stored, or reported in the past or by other parties (for a different purpose and/or using different methods and quality criteria). Sometimes referred to as data from other sources.
- **Metadata—**Metadata is structured information that describes, explains, locates, or otherwise makes it easier to retrieve, use, or manage an information resource.

Data Quality Objectives (DQOs)—Qualitative and quantitative statements derived from the DQO Process that clarify study objectives, define the appropriate type of data, and specify tolerable levels of potential decision errors that will be used as the basis for establishing the quality and quantity of data needed to support decisions.

Data Standard—Documented consensus-based agreement on the format and definition of common data.

Environmental Information—Includes data and information that describe environmental processes or conditions which support EPA's mission of protecting

human health and the environment. Examples include but are not limited to:

- direct measurements of environmental parameters or processes;
- analytical testing results of environmental conditions (e.g., geophysical or hydrological conditions);
- information on physical parameters or processes collected using environmental technologies;
- calculations or analyses of environmental information;
- information provided by models;
- information compiled or obtained from databases, software applications, decision support tools, websites, existing literature, and other sources;
- development of environmental software, tools, models, methods, applications; and
- design, construction, and operation or application of environmental technology.

Environmental Information Operations—A collective term for work performed to collect, produce, evaluate, or use environmental information and the design, construction, operation or application of environmental technology.

Environmental Measurement—A subgroup of Environmental Information that includes or produces values derived from tools, instruments, observational results, laboratory operations on environmental samples, or other sampling and testing equipment. It is any data collection activity or investigation involving the assessment of chemical, physical, or biological factors in the environment which affect human health and the environment.

Environmental Processes—Manufactured or natural processes that produce discharges or that impact human health and the environment.

Environmental Programs—Work or activities involving the environment, including but not limited to characterization of environmental processes and conditions; environmental monitoring; environmental research and development; the design, construction, operation or application of environmental technologies; and laboratory operations on environmental samples.

Environmental Technology—An all-inclusive term for systems, devices and their components applicable to both hardware and methods or techniques that measure and/or remove pollutants or contaminants and/or prevent them from entering the environment.

Examples include but are not limited to:

- Pollution prevention: measurement, monitoring, reduction, control, and/or treatment processes; such as wet scrubbers (air), granulated activated carbon unit (water), filtration (air, water).
- Contamination: containment to prevent further movement of the contaminants, such as capping, and solidification or vitrification, and biological treatment.
- Storage containers, methods, or facilities; such as drums, tanks, and pond or lagoon.
- Remediation processes and their components, and/or technologies; such as

contaminant removal and replacement with backfill, soil washing (soil), pump and treatment, soil vapor extraction (soil), land farming and other bioremediation processes.

For the purpose of this Procedure, Environmental Technology does not include or incorporate QA associated with the development and design of IT systems.

Extramural Agreement—A legal agreement between EPA and a non-EPA organization. Such agreements include but are not limited to contracts, work assignments, delivery orders, task orders, cooperative agreements, research grants, state and local grants, as negotiated in interagency agreements and agreements not funded by EPA.

Graded Approach—The process of determining the level of detail for management controls to be applied to an activity according to the intended use and the degree of confidence needed in the quality of the results. This approach establishes the QA and QC requirements commensurate with the importance of the work, the available resources, and the unique needs of the organization.

Intergovernmental—Between the EPA and international, other federal, state, tribal, territorial, area-wide, regional or local governments and agencies.

Management System—A management system may describe the policies, objectives, principles, organizational authority, responsibilities, accountability, and implementation plan of an organization.

Operations Manager—The Operations Manager is independent of the QAM. In some organizations this individual may also be referred to as the program manager or person responsible for the activity.

Organization—An EPA organization is an office, region, national center, or laboratory. An external organization is a state, tribe, agency or other government entity, academia, company, corporation, firm, enterprise, or institution, or part thereof, whether incorporated or not, public or private, that has its own functions and administration.

Process—A set of interrelated resources and activities which transforms inputs into outputs. Examples of processes include analysis, design, data collection, operation, fabrication, and calculation.

Product—The intended result or final output of an activity or process that is disseminated or distributed among EPA organizations or outside of EPA.

Quality—The totality of processes, procedures, features, and characteristics of a product or service that bear on its ability to meet the stated or implied needs and expectations of the user.

Quality Assurance (QA)—Management of an integrated system of activities involving planning, implementation, documentation, assessment, reporting, and quality improvement to ensure that a process, item, or service is of the type and

quality needed and expected by the organization.

Quality Assurance Manager (QAM)—The individual designated as the principal manager within the organization having oversight authority and responsibilities for planning, documenting, coordinating, and assessing the effectiveness of the Quality Program for the organization.

Quality Assurance Project Plan (QAPP)—A planning document related to a project or program that describes in comprehensive detail the necessary QA/QC requirements and other technical activities that must be implemented to ensure that the results of the work performed will satisfy the stated performance and acceptance criteria.

Quality Assurance Review Form (QARF)—An internal EPA form that describes QA requirements for contracts and documents the review and approval by the QAM. This document must be included with all contract packages involving either new work or a significant change. Actions that do not affect the work performed by the contractor (e.g., incremental funding or time extensions, do not require a QA Review Form). Exceptions to the requirement for use of this form are described in EPA contracting guidance and are subject to approval by the organization authorized to execute actions on behalf of the DAA for IT/IM/CIO according to Delegation 1-41. Mandatory Quality Program.

Quality Control (QC)—The overall system of technical activities that measures the attributes and performance of a process, item, or service against defined standards to verify that they meet the stated requirements; operational techniques and activities that are used to fulfill requirements for quality.

Quality Management—The aspects of the organization's overall management system that drive the implementation of an organization's Quality Program. Quality Management includes strategic planning, allocation of resources, and other systematic activities (e.g., planning, implementation, documentation, and assessment) pertaining to an organization's Quality Program.

Quality Management Plan (QMP)—A formal document that describes a Quality Program in terms of the organizational structure, functional responsibilities of management and staff, lines of authority, and required interfaces for those planning, implementing, and assessing all activities conducted.

Quality Program—The totality of management controls, processes, and documentation in EPA's planning, implementation, and assessment for ensuring the quality of Agency environmental information operations products and services.

9. WAIVERS

Statutory requirements for quality may supersede the specifications in this Procedure or be more rigorous. In such cases, affected programs shall be exempt from the requirements of this Procedure. EPA organizations conducting exempted activities shall comply with the *Environmental Information Quality Policy* in all other respects.

The following exemptions from these requirements apply:

- The collection of environmental data under the authority of Good Laboratory Practices as defined by 40 CFR 792, for the Toxic Substances Control Act.
- The collection of environmental data under the authority of Good Laboratory Practices as defined by 40 CFR 160, for the Federal Insecticide, Fungicide, and Rodenticide Act.

10. DIRECTIVE(S) SUPERSEDED

- *Policy and Program Requirements for the Mandatory Agency-Wide Quality Management System* (CIO 2105.0, May 5, 2000)
- *EPA Quality Manual for Environmental Programs* (CIO 2105-P-01-0, May 5, 2000)
- *Quality Policy* (CIO 2106.0, October 20, 2008)
- *Procedure for Quality Policy* (CIO 2106-P-01.0, October 20, 2008)
- CIO Clarification Memorandum, Subject: EPA Quality Policy (CIO 2106.0, December 10, 2010)
- Environmental Information Quality Procedure (CIO 2105-P-01.2, July 19, 2022)

11. CONTACTS

For information about this directive or the Quality Program, please contact the Office of Mission Support, Information Technology/Information Management (IT/IM), Office of Records, Administrative Systems and eDiscovery, Enterprise Quality Management Division, or email quality@epa.gov.

VAUGHN NOGA

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Vaughn Noga, Chief Information Officer and Deputy Assistant Administrator for Information Technology and Information Management

APPENDIX A:
ACRONYMS & ABBREVIATIONS

AA	Assistant Administrator
ANSI	American National Standards Institute
ASQ	American Society for Quality
CFR	Code of Federal Regulations
CIO	Chief Information Officer
CO	Contracting Officer
COR	Contracting Officer Representative
DAA	Deputy Assistant Administrator
DQA	Data Quality Assessment
DQA	Director of Quality Assurance
DQOs	Data Quality Objectives
EI	Environmental Information
EPA	Environmental Protection Agency
EPAAG	EPA's Acquisition Guide
EQMD	Enterprise Quality Management Division
FAR	Federal Acquisition Regulations
FMFIA	Federal Managers Financial Integrity Act
FY	Fiscal Year
IGMS	Integrated Grants Management System
IM	Information Management
IQA	Information Quality Act
IQG	Information Quality Guidelines
IT	Information Technology
LSASDD	Laboratory Services and Applied Science Division Director
MSDD	Mission Support Division Director
MSR	Management System Review
NPO	National Program Office
NTTA	National Technology Transfer and Advancement Act
OAM	Office of Acquisition Management
OMB	Office of Management and Budget
OMS	Office of Mission Support
ORASE	Office of Records, Administrative Systems and eDiscovery
PARS	Performance Appraisal and Recognition System
PL	Public Law
PM	Project Manager
PO	Project Officer
PWS	Performance Work Statement
QA	Quality Assurance
QAM	Quality Assurance Manager
QAPP	Quality Assurance Project or Program Plan
QARF	Quality Assurance Review Form
QC	Quality Control
QMP	Quality Management Plan
QSA	Quality System Assessment
RA	Regional Administrator
RFC	Request for Correction

RFR	Request for Reconsideration
RQAM	Regional Quality Assurance Manager
SAC	Strategic Advisory Council
SIO	Senior Information Official
SOP	Standard Operating Procedure
SOW	Statement of Work
STPC	Science and Technology Policy Council
USC	United States Code

APPENDIX B:
QUALITY ASSURANCE ANNUAL CERTIFICATION

I certify and can provide reasonable assurance that *(provide your organization's name)* _____ is implementing EPA's QA directives and has appropriate internal controls in place to ensure that environmental information produced and utilized is of known and documented quality and suitable for the intended use.

(Provide an electronic signature and date to include the name, title and organization)