

**TEXAS COMMISSION ON
ENVIRONMENTAL QUALITY**

QUALITY MANAGEMENT PLAN

Revision 27

January 2022

Approved:



Toby Baker
Executive Director

11/23/2021

Date

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AGENCY GOALS AND PHILOSOPHY

Conservation of the state's environment through the prudent stewardship of its natural resources is a priority goal of the State of Texas. In fulfilling this goal, the Texas Commission on Environmental Quality (TCEQ, or commission, or agency) will act in accordance with the highest standards of ethics, accountability, efficiency, and responsiveness to the people of Texas. The agency will communicate openly with everyone: the people of Texas who rely on the agency to protect the environment and their health; the regulated community; elected officials; and the media. Since our people are our most valued asset, all employees will have an equal opportunity to excel in an environment that fosters open communications and employee involvement.

Protecting public health and the environment and ensuring effective management of our natural resources is a public trust. TCEQ will approach these activities with a sense of purpose and responsibility and will provide a level of service that exceeds the expectations of our stakeholders. The public and regulated community alike can be assured of a balanced and sensible approach to regulation.

To accomplish our mission, we will:

- base decisions on the law, common sense, sound science, and fiscal responsibility;
- ensure that regulations are necessary, effective, and current;
- apply regulations clearly and consistently;
- ensure consistent, just, and timely enforcement when environmental laws are violated;
- ensure meaningful public participation in the decision-making process;
- promote and foster voluntary compliance with environmental laws and provide flexibility in achieving environmental goals; and
- hire, develop, and retain a high-quality, diverse workforce.

At a minimum, staff is responsible for ensuring that work products are of known and documented quality, and are deemed acceptable for their intended use. Ultimately, we will be judged by how well these products and our programs meet the expectations and needs of our customers.

INTRODUCTION

Quality assurance (QA) may be defined as:

An integrated system of management 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 customer.

EPA Quality Manual for Environmental Programs, CIO 2105-P-01-0, May 2000

Formal, documented QA programs are a prerequisite for federal funding of environmental data activities. State law also requires formal QA programs for certain environmental activities. In other cases, the importance and complexity of environmental operations warrant implementation of formal QA programs.

This Quality Management Plan (QMP) documents and describes the organizational arrangements, processes, procedures, and requirements of TCEQ's QA program. Approval of the QMP by all of the agency's senior management reflects the agency's commitment to the principles and quality systems described in the document.

Appendix A describes the federally-funded programs governed by TCEQ's QA program. Appendix A may also include certain state-funded programs that operate according to requirements contained in this QMP.

The QMP is updated annually. Recipients of the QMP are responsible for keeping their copies available and up to date. Copies are issued to those staff whose work is directly related to the collection, analysis, and use of environmental data by TCEQ.

The QMP contains 10 sections organized to parallel federal guidelines and national standards:

- Management and Organization
- Quality System Components
- Personnel Qualification and Training
- Procurement of Items and Services
- Documents and Records
- Computer Hardware and Software
- Planning
- Implementation of Work Processes
- Assessment and Response
- Quality Improvement

The current version of the QMP is available electronically at:

www.tceq.texas.gov/assets/public/compliance/compliance_support/ga/gmp.pdf

For additional information concerning this QMP or other aspects of TCEQ's quality system, please contact:

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LIST OF ACRONYMS AND ABBREVIATIONS

| | |
|--------------------|---|
| ADA | American Disabilities Act |
| AEA | Atomic Energy Act |
| AMM | Analytical Method Modification |
| ANSI | American National Standards Institute |
| AGD | Air Grants Division |
| APD | Air Permits Division |
| AQD | Air Quality Division |
| ASQ | American Society for Quality |
| CAP | Corrective Action Plan |
| CATMN | Community Air Toxics Monitoring Network |
| CBBEP | Coastal Bend Bays and Estuaries Program |
| CCMP | Comprehensive Conservation and Management Plan |
| CERCLA | Comprehensive Environmental Response, Compensation, and Liability Act (also known as Superfund) |
| CID | Critical Infrastructure Division |
| CRP | Clean Rivers Program |
| CWA | Clean Water Act |
| CWQMN | Continuous Water Quality Monitoring Network |
| DIR | Texas Department of Information Resources |
| DQO | Data Quality Objective |
| EPA, also U.S. EPA | United States Environmental Protection Agency |
| EPA-QA/G-# | EPA Quality Assurance Guidance Document |
| EPA-QA/R-# | EPA Quality Assurance Requirements Document |
| EXEC | Office of the Executive Director |
| FCAA | Federal Clean Air Act |
| FEM | Forum on Environmental Measurements (EPA) |
| FIFRA | Federal Insecticide, Fungicide and Rodenticide Act |
| FJD | Functional Job Description |
| FLSA | Fair Labor Standards Act |
| FOG | Field Operations Group (EPA) |
| GAP | Guide for Administrative Procedures Manual |
| GBEP | Galveston Bay Estuary Program |
| GIS | Geographic Information Systems |

(List of Acronyms and Abbreviations, cont.)

| | |
|---------|--|
| GOC | PPG or Grant Office Coordinator |
| GPS | Global Positioning System |
| HRSS | Human Resources and Staff Services |
| IGR | Intergovernmental Relations Division |
| IHW | Industrial and Hazardous Waste |
| IRD | Information Resources Division |
| IRM | Information Resources Manager |
| ISO/IEC | International Organization for Standardization/International Electrotechnical Commission |
| IT | Information Technology |
| ITSC | Information Technology Steering Committee |
| LMS | Learning Management System |
| LTSCC | Lead Testing in School and Child Care |
| LUST | Leaking Underground Storage Tank |
| MARLAP | Multi-Agency Radiological Laboratory Analytical Protocols |
| MQ | Minimum Qualifications |
| MQO | Measurement Quality Objective |
| MSR | Management System Review |
| NAAQS | National Ambient Air Quality Standards |
| NEI | National Emissions Inventory |
| NEIEN | National Environmental Information Exchange Network |
| NELAC | National Environmental Laboratory Accreditation Conference |
| NELAP | National Environmental Laboratory Accreditation Program |
| NORM | Naturally Occurring Radioactive Material |
| NPS | Nonpoint Source |
| NRC | Nuclear Regulatory Commission |
| OA | Office of Air |
| OAS | Office of Administrative Services |
| OCE | Office of Compliance and Enforcement |
| OLS | Office of Legal Services |
| OOW | Office of Waste |
| OPP | Operating Policy and Procedure |
| OW | Office of Water |
| PAL | Project Asset Library |
| PAMS | Photochemical Assessment Monitoring Stations |

(List of Acronyms and Abbreviations, cont.)

| | |
|---------|--|
| PA/SI | Preliminary Assessment/Site Inspection |
| PPA | Performance Partnership Agreement |
| PPG | Performance Partnership Grant |
| PST | Petroleum Storage Tank |
| PWSSP | Public Water System Supervision Program |
| QA | Quality Assurance |
| QAFAP | QA Field Activities Procedure (EPA) |
| QAP | Quality Assurance Plan |
| QAPP | Quality Assurance Project Plan |
| QC | Quality Control |
| QMP | Quality Management Plan |
| QSA | Quality System Audit |
| RCRA | Resource Conservation and Recovery Act |
| RESTORE | Resources and Ecosystems Sustainability, Tourist Opportunities, and Revived Economies of the Gulf Coast States Act |
| RM | Radioactive Materials |
| RMD | Radioactive Materials Division |
| SAP | Sampling and Analysis Plan |
| SDWA | Safe Drinking Water Act |
| SLAMS | State or Local Air Monitoring Stations |
| SIM | State Initiative Monitoring Network |
| SIP | State Implementation Plan |
| SOP | Standard Operating Procedure |
| SWQM | Surface Water Quality Monitoring |
| SWQMIS | Surface Water Quality Monitoring Information System |
| TAC | Texas Administrative Code |
| TCEQ | Texas Commission on Environmental Quality |
| TERP | Texas Emissions Reduction Plan |
| TMDL | Total Maximum Daily Load |
| TNI | The NELAC Institute |
| TSA | Technical Systems Audit |
| UIC | Underground Injection Control |
| U.S. | United States |
| USGS | United States Geological Survey |

(List of Acronyms and Abbreviations, cont.)

| | |
|------|--|
| WIIN | Water Infrastructure Improvements for the Nation |
| WQA | Water Quality Assessment |
| WQS | Water Quality Standards |

1. MANAGEMENT AND ORGANIZATION

Quality in environmental programs contributes to public health and safety, economic development, efficient use of public monies, technical credibility, and a recognition of excellence. The achievement of quality in environmental programs is the responsibility of each TCEQ employee.

This plan is intended to meet all applicable regulatory requirements concerning QA. TCEQ programs governed by this plan are listed in Appendix A. Activities governed by this QMP include, in part, environmental data operations, characterization of environmental processes and conditions, design and construction of engineered environmental systems, environmental monitoring, laboratory analyses, and laboratory accreditation. Agency organizations and staff and external contractors are bound by all or part of the requirements delineated in this QMP, as appropriate.

TCEQ ORGANIZATION

TCEQ is a regulatory agency of the State of Texas. Regulatory decisions are made by a three-member, quasi-judicial commission appointed by the Governor with the advice and consent of the Texas Senate. Day-to-day operation of TCEQ is delegated to an appointed Executive Director.

TCEQ is organized into offices. With the exception of the Executive Director's office, offices are managed by Directors. Offices are composed of one or more divisions managed by Deputy Directors, except for Regional Areas which are managed by Area Directors and are composed of Regional Offices managed by Regional Directors. (Note: Management functions cited in the QMP for Deputy Directors generally apply to Area Directors as well.) Divisions and Regional Offices are composed of one or more sections, and sections may be further divided into teams. Sections, teams, and work groups are managed by Section Managers, Team Leaders, and Work Leaders, respectively. TCEQ has assigned authority for environmental grants, programs, and projects to grant, program, and project managers, respectively, and has designated lead QA staff for each environmental program.

RESPONSIBILITIES AND AUTHORITIES

The mission of TCEQ and its component offices and divisions is described in Appendix B. Descriptions of personnel responsibilities are in Appendix C. Lists of lead organizations, QA staff, program managers, and grant managers are in Appendix D. Organization charts are in Appendix E.

QUALITY ASSURANCE ORGANIZATION

TCEQ uses a semi-decentralized QA program, relying on one organizational unit to coordinate development and implementation of the agency-wide program and certain program quality systems, and relying on offices, divisions, and individual programs to implement other QA programs. The Monitoring Division, within the Office of Compliance and Enforcement (OCE), serves as the QA coordinating division for the TCEQ.

The TCEQ QA program is organizationally independent of operational programs and activities within the agency and has sufficient access and authority to coordinate development and implementation of the agency's quality system. The Monitoring Division QA staff have access to all work areas and sufficient authority and organizational freedom

to identify, initiate, and facilitate solutions to quality problems and to verify the implementation of solutions to problems.

Directors and Deputy Directors have designated lead QA staff for each of the programs governed by this plan. (See Appendix D.) These staff also have access to related work areas and sufficient authority and organizational freedom to identify, initiate, recommend, and provide solutions to quality problems and to verify the implementation of solutions to problems.

With delegation from TCEQ's executive management, the TCEQ QA Manager has responsibility for oversight of the agency's QA program and its operations. Issues and questions regarding the agency QA program and its operations may be raised by agency QA staff, agency staff, and agency management to the TCEQ QA Manager. Resolution of quality-related disputes between individual program areas and the agency's QA staff are expected to be resolved at the lowest organizational level, i.e., agency QA staff, agency staff, or agency management. Quality-related disputes that cannot be resolved at the staff level will be elevated through the TCEQ QA Manager to the Deputy Director of the Monitoring Division. If disputes are not satisfactorily resolved at this level, the issues shall be elevated to the Director of the Office of Compliance and Enforcement, and subsequently to the Executive Director.

COMMUNICATION AND IMPLEMENTATION

Management ensures the agency quality system is understood and effectively implemented through program and project planning activities, the implementation of organizational and project-specific management controls, employee training programs, and ongoing assessment and quality improvement activities. These activities, programs, and controls are described in this QMP as indicated below:

- Program/project planning activities and organizational and project-specific management controls: Sections 2, 4, 5, 6, 7, 8 and Appendices A, C, D, F and G;
- Employee training: Sections 2 and 3;
- Assessment and response: Section 9; and
- Quality improvement: Section 10.

ANNUAL ASSESSMENT REPORT TO EXECUTIVE MANAGEMENT

The Monitoring Division provides an annual assessment report to executive management concerning the effectiveness of the quality system and the adequacy of resources for achieving quality. Agency management considers this assessment and other factors in determining response actions.

RESOURCES

Office and executive management will ensure that resources are adequate (i.e., meet customer needs and expectations) to achieve and maintain quality in environmental programs. Resource allocations for QA and quality control activities, including resources allocated to QA programs and personnel, are determined on an annual basis at the agency, office, division, and section level and are adjusted as necessary to achieve programmatic objectives.

2. QUALITY SYSTEM COMPONENTS

TCEQ has implemented a quality system designed to produce the type and quality of data needed and expected in environmental programs. Environmental data used in agency decisions will be of known and documented quality and will meet specific program- and project-level requirements. The system has been implemented for all programs listed in Appendix A.

The agency quality system includes the organizational arrangements, documents, and processes described in this QMP. This plan documents the system used to maintain the quality of work conducted by TCEQ, the lines of reporting and communication, and coordination mechanisms.

The quality system includes both organizational and project controls. The term “organizational controls” refers to activities that support common functions or functions that encompass several projects and programs. Project controls are specific to work programs and activities.

Environmental programs are administered and performed by qualified personnel using appropriate technologies and techniques. Qualifications of personnel are documented and both individual and program performance are regularly assessed. Personnel receive training in the responsibilities and duties and associated program elements, codes, standards, and procedures of the quality system. The training may include formal instruction, seminars, on-the-job training, participation in technical conferences, and other activities determined to be appropriate. Training needs and the achievement of training objectives are documented.

Management personnel maintain frequent contact with and are continually involved in monitoring elements of the quality system for which they are responsible. This contact and involvement are accomplished through meetings, reports, and contacts with technical, administrative, and other management personnel.

COMPONENTS

The TCEQ quality system includes components that establish requirements and specifications for environmental programs and projects, planning and implementation tools, and assessment and response activities.

Requirements and specifications are established in state and federal statutes, TCEQ rules (such as Title 30, Texas Administrative Code (TAC), Chapter 25, regarding laboratory accreditation and certification), other applicable state and federal rules, and state, federal, and international requirements documents. Appendix A contains a list of applicable quality requirements documents used by the TCEQ. Other requirements and specifications may be contained in Performance Partnership Agreements (PPAs), grant work plans, and contracts. Work activities for the environmental programs listed in Appendix A are planned using the U.S. Environmental Protection Agency’s (EPA) data quality objectives (DQO) process or a comparable systematic planning process, and are documented in quality assurance project plans (QAPPs) or other types of QA documents. Appendix G contains procedures governing the development, approval, implementation, and maintenance of QAPPs.

The environmental programs listed in Appendix A are implemented according to specifications and instructions contained in grant work plans and contractual agreements, this QMP, program or project QAPPs, sampling and analysis plans (SAPs), quality assurance plans (QAPs), and standard operating procedures (SOPs). Section 5 describes procedures governing the development and use of quality-related documents and records. Section 8 describes how TCEQ ensures work is performed according to approved plans.

Assessments of environmental programs provide the information used in planning and implementing environmental programs and projects, for accrediting laboratories, and in improving the quality systems. TCEQ Operating Policy and Procedure (OPP) 18.09.01 specifies procedures for planning assessment programs, including planning considerations, types of assessments, and approval processes. TCEQ OPP 18.09.02 sets forth procedures for conducting QA audits. (See also Sections 9 and 10.)

EPA Field Operations Group (FOG) Operational Guidelines for Field Activities

In 2013, EPA issued “Guidelines for Field Activities” to establish national consistency in field activities and further promote the collection of reliable and defensible environmental data. The guidelines are based on EPA quality-related requirements and provisions in *ISO/IEC 17025:2005 General Requirements for the Competence of Testing and Calibration Laboratories*. The guidelines are designed to ensure EPA field staff, grantees, and grantee contractors and subcontractors have quality systems that include documentation of the following components:

1. Personnel and Training
2. Document Control
3. Records Management
4. Sampling and Environmental Data Management
5. Field Documentation
6. Field Equipment
7. Field Inspection and Investigations
8. Reports
9. Internal Audits
10. Corrective Action

Although the FOG guidelines serve as guidance and not requirements for TCEQ, elements of the guidelines are already represented in TCEQ QAPPs and other agency QA documents. The TCEQ QA Manager will refer to the guidelines in reviews of program and project-specific QA documentation when warranted.

The guidelines are now incorporated into the EPA QA Field Activities Procedure (QAFAP).

3. PERSONNEL QUALIFICATION AND TRAINING

TCEQ personnel performing work on environmental programs shall be qualified to perform assigned work. Initial and ongoing personnel qualifications shall be determined, training needs shall be identified, access to appropriate training opportunities shall be provided, and the acquisition of needed knowledge, skills, and abilities shall be verified and documented.

FUNCTIONAL JOB DESCRIPTIONS

Agency management prepares Functional Job Descriptions (FJDs) for each TCEQ position. Each FJD includes a brief job description statement; a list of the essential job functions and the percentage of time devoted to each function; physical and environmental demands and hazards; and cognitive, communication, and other job-related demands. The FJD assists with ensuring proper classification, Fair Labor Standards Act (FLSA) designation, and American Disabilities Act (ADA) accommodations. The Human Resources and Staff Services (HRSS) Division reviews, approves, and maintains the FJDs. (See TCEQ OPP Chapter 10.01.)

MINIMUM QUALIFICATIONS

The agency establishes minimum qualifications (MQs) through the collaborative efforts of program management and HRSS staff. The State Auditor's Office provides general qualification guidelines for all state job classifications; these guidelines are used in the development of MQs. Each agency job specification includes the MQs, which establish educational requirements, work experience, and any required licenses; knowledge, skills, and abilities; career ladder time-in-grade requirements; and other requirements specific to individual job classifications. HRSS develops and maintains job specifications for 69 non-career ladder and 16 career ladder classification series. (See TCEQ OPP Chapters 10.01 and 10.04.)

EMPLOYEE TRAINING NEEDS

Training needs are determined annually on an agency-wide basis through a needs assessment process and on an individual basis by supervisors in consultation with employees. Training needs are based on a variety of factors, including data collected from the agency's workforce plan, succession plans, statutory requirements, management directives, career ladder requirements, SOPs, QAPPs, and the employee development plans as part of an employee's appraisal. (See TCEQ OPP Chapter 16.01 and TCEQ Guide for Administrative Procedures (GAP) Manual, Section 4A.)

Supervisors document training needs in a Career Enhancement Feedback and Plan for each employee, as part of the performance management system. (See TCEQ OPP 10.02). The Career Enhancement Feedback and Plan identifies training and developmental needs to enhance or improve an employee's current performance and to enhance career opportunities for the employee. Training may include courses from core curricula and/or technical, QA, operational, general work skills, employee development, leadership, and management development categories. Additional training needs may be specified in QAPPs.

TRAINING PROGRAMS

The HRSS Learning and Development Section develops training curricula and offers courses based on needs assessments and input received from programs.

Training staff design curricula aligned with adult learning theory. They identify qualified training vendors for specific courses on the basis of proposals and demonstrated competence. Written evaluations, observation, and participant feedback are used to assess course content and instructor effectiveness.

Employees and supervisors determine whether training programs and courses offered outside of the TCEQ by educational institutions, professional associations, and other providers are useful for enhancing job performance or professional development. These programs and courses may include such activities as instructional courses, seminars, professional meetings, and workshops. Training specialists provide consultation and assistance as needed in assessing these programs and courses.

TRAINING RECORDS

HRSS maintains records of agency core training through the agency's Learning Management System (LMS). Agency-hosted, job-related learning events and training records are also maintained in the LMS, if provided to the Training Team. The LMS data serves as the official data record. Program divisions, sections, or supervisors may also maintain individual training information for their staff members.

DEMONSTRATION OF COMPETENCY

In 2013, EPA issued directive *FEM 2012-02 Revision 1*, requiring organizations generating or using environmental measurement data under certain EPA-funded assistance agreements to submit documentation of their competency prior to performing new grant-funded work. The directive is effective for grants totaling more than \$200,000 and issued or renewed on or after May 14, 2013. The goal of the directive is to ensure organizations (and their grantees/contractors) performing environmental data operations have effective quality management systems and the technical competence to generate valid environmental data.

Each TCEQ grant program will include a statement of competency in its grant work plan and in program/project QA documents. TCEQ will also demonstrate compliance with this directive through laboratory accreditation and documentation of field and other competencies in program and project QA documents. This demonstration may include, but is not limited to:

- Maintaining records of current organizational charts and position descriptions for pertinent TCEQ staff, contractors, and subcontractors, along with major responsibilities and qualifications (e.g., position descriptions, training certificates, degrees, and active participation in QA associations as noted in TCEQ QA documents or contractor/subcontractor files);
- Confirming through the annual QA report that the QMP and applicable QAPPs are being followed, and documenting the training TCEQ staff received for the year;

- Ensuring that training records are maintained in TCEQ files or in contractor and subcontractor files; and
- Maintaining reported results of internal and external audits and assessments of the programs, including open and closed corrective/preventive actions.

The TCEQ QA Manager will ensure implementation of the directive through coordination with the TCEQ Budget and Planning Division, and with individual programs.

QUALITY ASSURANCE TRAINING

QA training available to TCEQ staff includes the following courses offered by EPA Region 6 and TCEQ:

1. EPA Quality Project and Program Management (also titled "R6 QA Training for Non-EPA R6 Employees")
2. Project Management Training
3. Multi-Agency Radiological Laboratory Analytical Protocols (MARLAP)

SAFETY TRAINING

All personnel who work with or adjacent to hazardous chemicals must know and follow the procedures outlined in the agency's Chemical Hygiene Plan as appropriate to their assignments. Personnel may also be required to receive other training (e.g., respirator fit testing). Regional and some central office field staff participate in regular safety meetings covering a variety of topics, including use of chemical reagents, hazard communication, emergency evacuation, and safety equipment checks.

There are special hazards associated with handling radioactive materials. As such, TCEQ strongly recommends that the Radioactive Materials Division (RMD) and/or the Critical Infrastructure Division's (CID) Radioactive Materials Compliance Team be contacted so that a health physicist experienced in radiation measurement and protection can be assigned and used for consultation prior to initiation of any activities at a site suspected of being contaminated with radioactive substances. In addition, radiation safety training is recommended for staff visiting or inspecting sites where possible radioactive materials exist. Training is provided by the U.S. Nuclear Regulatory Commission (NRC), the EPA Region 6, the Texas Department of State Health Services, and/or the TCEQ.

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4. PROCUREMENT OF ITEMS AND SERVICES

The procurement of items and services will be controlled and documented to ensure conformance with specified requirements, i.e., that contracted and subcontracted activities produce results of acceptable quality. Requirements and specifications will be included or referenced in procurement documents. The acceptability of purchased items and services will be verified and documented.

AUTHORITY AND PROCEDURES

Statutory requirements concerning procurement are contained in Texas Government Code, Chapters 771, 783, 791, 2155, 2156, 2157, 2158, 2161, 2252, 2254, 2260, 2261 and 2262. Additional regulatory guidance is contained within 30 TAC Chapters 11 and 14.

Procurement procedures are documented in Chapters 2 and 3 of the TCEQ OPP Manual. Additional procedures governing grants and contracts are documented in the TCEQ GAP Manual. These documents describe assignments of authority and procedures for planning and approving procurements, determining specifications and requirements to be included in procurement documents, selecting vendors, awarding procurements, and accepting purchased items and services. (See TCEQ GAP Manual, Sections 2A, 2C, 2D, 2E, and 2M.)

PROCUREMENT DOCUMENTS

All procurements are defined in writing in one or more procurement documents (such as purchase orders, invitations for bid, requests for proposals, and procurement contracts). These documents specify tasks and product specifications and technical, quality, administrative, and other requirements. All procurements are approved prior to issuance. Approval requirements vary depending on the nature and cost of the item or service being purchased. (See TCEQ GAP Manual, Section 2M.)

TECHNICAL REQUIREMENTS

Technical requirements are determined by program managers, or designees, and included in procurement documents. Purchases of information technology products and services are also reviewed and approved by Information Resources Division (IRD) staff.

QUALITY ASSURANCE REQUIREMENTS

QA requirements are determined by program managers, or designees, with the assistance of QA staff, legal staff, Procurement and Contracts staff, and others. When necessary, QA requirements are included in procurement documents. These documents include or reference general and specific terms and conditions, design requirements, and certifications as appropriate. The documents also include other requirements to assure adequate quality and, to the extent necessary, require suppliers, contractors, and subcontractors to have QA programs consistent with the TCEQ program.

Procurement documents may include pre- and post-award source inspections, supplier audits, readiness reviews, evaluations of objective evidence of quality furnished by the supplier, acceptance testing, and other requirements determined by Deputy Directors, or designees, to be appropriate.

CHANGES TO PROCUREMENT DOCUMENTS

Changes to procurement documents generally receive the same reviews and approvals as original procurement documents. Contract changes are approved based upon the type of change, i.e., scope of work change, increase/decrease in contract amount, extension or renewal of contract end date. (See GAP Manual, Section 2M.)

SOLICITATION RESPONSES AND SUPPLIER SELECTIONS

Responses to solicitations are reviewed by Deputy Directors, or designees, using written score or evaluation sheets. These sheets specify technical, quality, and other criteria used to evaluate the adequacy of responses to solicitations, to qualify potential suppliers, and to select vendors.

ACCEPTANCE OF ITEMS AND SERVICES

Items and services received from suppliers are evaluated upon delivery against acceptance criteria (i.e., task, product, and technical specifications, and technical, quality, administrative, and other requirements) contained in procurement documents. Program managers, or designees, determine whether acceptance criteria have been met and whether items and services are adequate and appropriate for use.

Items and services that do not meet acceptance criteria are not accepted for use. Corrective actions are initiated in accordance with state statutes, contract provisions, and TCEQ procurement procedures. Corrective actions may range from repair or replacement of defective deliverables to re-award of procurements.

5. DOCUMENTS AND RECORDS

Documents that specify requirements, procedures, and instructions affecting the quality of environmental programs shall be adequate for the intended purpose and shall be controlled. QA records will be produced, controlled, and maintained to reflect the achievement of the required quality for completed work and to fulfill statutory, regulatory, and contractual requirements.

Requirements concerning documents and records are contained in the following:

- Texas Government Code Chapters 441 and 552;
- Texas Penal Code Section 37.10; and
- TCEQ OPP 13.02.

(See also Texas State Library, *State Records Management Laws*, State Agency Bulletin Number Four.)

QUALITY ASSURANCE DOCUMENTS

Documents that specify quality-related requirements and instructions may include, but are not limited to, the following:

- TCEQ QMP;
- QAPPs;
- SAPs, QAPs, and Continuous Water Quality Monitoring Network (CWQMN) project plans;
- grant work plans;
- contracts and work orders;
- data management plans;
- administrative OPPs and SOPs;
- quality manuals;
- technical SOPs, including organization/program-specific QA procedures and checklists;
- program instructional documents; and
- program guidance documents.

QMPs and QAPPs are prepared, reviewed, approved, distributed, maintained, and revised according to procedures described in Appendices F and G, respectively. SAPs and other project planning documents are prepared, reviewed, and approved according to program requirements.

TCEQ OPPs are developed, revised, and deleted in accordance with TCEQ OPP 1.00 and Chapter 1 of the GAP Manual. TCEQ OPP 1.00 also contains procedures for both interim and expedited OPPs.

Generally, SOPs are proposed, reviewed, and approved by staff and managers of relevant areas of the agency. Staff involved in execution of SOPs should be involved in SOP development and revision. SOPs for collection, analysis, and validation of environmental data developed in accordance with program requirements are reviewed during use and at other times, such as during the development of QAPPs or on regular program schedules. SOPs are to reflect current practices and must be produced in accordance with established

document control procedures. The document control procedures must specify requirements for minimum SOP contents, unique SOP identification, records management, and approval authority. As requested or necessary, agency QA staff may participate in the review and approval process for SOPs governing environmental data operations.

Revisions to SOPs are made as necessary and reviewed in the same manner as new SOPs or as specified in other procedures. New SOPs and revisions to existing SOPs are uniquely identified. Each new SOP (and revision of an existing SOP) must be approved, prior to issuance, by the responsible Deputy Director, or designee(s), and division or agency QA staff where appropriate. SOPs will conform to *Guidance for Preparing Standard Operating Procedures (SOPs) for Quality-Related Documents* (EPA QA/G-6) as applicable. Laboratory-generated SOPs will conform to the *TNI Standard Volumes 1 and 2 (latest version)*.

SOPs will address or include the following, as appropriate:

- purpose;
- scope and applicability;
- personnel qualifications/training;
- definitions;
- procedure(s);
- safety;
- records;
- references; and
- tables, diagrams, flowcharts, and forms

The QA Manager will coordinate development of agency-wide QA procedures. At a minimum, the QA Manager will develop and maintain procedures for:

- review, approval, distribution, revision, and control of agency-wide QA procedures;
- review, approval, distribution, revision, and control of agency QMPs;
- review, approval, distribution, revision, and control of QAPPs; and
- training and certification of the QA Manager, QA specialists, and quality system auditors.

Deputy Directors or their designees shall determine and document assignments of authority and procedures concerning the development, distribution, and maintenance of SOPs for their respective programs. Deputy Directors or their designees are responsible for ensuring and communicating that new SOPs are available to staff and for ensuring that obsolete SOPs are removed from all points of issue or use.

QUALITY ASSURANCE RECORDS

QA records are items that furnish objective evidence of the quality of items or of activities that have been verified and authenticated as technically complete and correct. QA records may include correspondence, photographs, drawings, forms, completed checklists, reports, and electronically recorded data.

OFFICIAL STATE RECORDS

Assignments of authority and procedures concerning the identification, verification, authentication, handling, retention, and disposition of documents and records needed to safeguard the legal and financial rights of the State of Texas and any person directly affected by activities of the TCEQ are contained in TCEQ OPP 13.02. Deputy Directors, or their designees, oversee and implement management of division records and other

operations, including fulfillment of statutory, regulatory, and contractual requirements for environmental programs. They are to establish appropriate controls for the protection of confidential and sensitive information, and to determine which records are needed to reflect the achievement of required quality for completed work.

Records produced by TCEQ and maintained as official records of the State of Texas are documented in the agency Records Retention Schedule. The TCEQ Records Retention Schedule can be viewed by agency staff at:

tceq.sharepoint.com/sites/OAS/ir/rm/Pages/records-retention.aspx

The QA Manager, or designees, shall maintain QA records relating to the agency quality system and ensure that these records are identified in the Records Retention Schedule. Program managers, or designees, shall maintain QA records relating to their respective programs and ensure that these records are identified in the Records Retention Schedule. Project managers, or designees, shall maintain QA records relating to their respective projects and ensure that these records are identified in the Records Retention Schedule. These individuals shall specify the location of and procedures for identifying, verifying, authenticating, handling, retaining, and disposing of these records and shall also maintain an up-to-date listing of all types of QA records relating to their respective areas of responsibility.

Documentation identifying environmental activities subject to quality system requirements is maintained by the Federal Funds Section of the Budget and Planning Division and by program management. Cognizant federal officials (e.g., EPA Region 6 Project Officers) communicate requirements directly to the Federal Funds Section and to agency program management through the use of grant documents.

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6. COMPUTER HARDWARE AND SOFTWARE

Computer hardware, software, and networks used to manage data for environmental programs shall be controlled to ensure reliable stewardship of the data.

ADOPTION OF AND CHANGES TO INFORMATION TECHNOLOGY STANDARDS

Information technology (IT) standards, and changes to the standards, are approved by the Information Technology Steering Committee (ITSC) or the Information Resources Manager (IRM). Changes to agency standards can be initiated through the agency's IT governance structure and management structures to meet internal needs, legislative and regulatory mandates, and other oversight entity requirements. Information on IT governance and hardware and software management is provided in OPPs 8.01, 8.02, and on the TCEQ Sharenet.

HARDWARE

Workstations

The Customer Support Center in IRD maintains workstation standards. The standards specify the minimum configuration with sufficient performance to run the agency's standard software and operate on the local-area networks. Systems are regularly replaced in accordance with IRD's lifecycle refresh strategy."

The Customer Support Center tests examples of each configuration before large orders are placed. All such systems are purchased by IRD following the same specifications, and are set up and installed by the Customer Support Center for consistency and supportability.

The IRD Deputy Director or IRM must approve all exceptions to standard workstation configurations. Before exceptions are approved, IRD staff must verify that (1) there is a business need for a system with special characteristics, (2) the proposed systems will meet the special need, and (3) the proposed systems can be supported using available resources.

Servers Managed by TCEQ and Network Components

The Infrastructure Management Section in IRD develops specifications for servers and network devices to meet the service requirements of agency applications.

Servers Managed by Data Center Services Contractor

Standards for servers managed by the Data Center Services contractor under a contract with the Texas Department of Information Resources (DIR) are set by the contractor and DIR. TCEQ accesses these services through an interagency contract with DIR.

Exceptions

Exceptions to hardware standards set by TCEQ must be approved by the IRD Deputy Director or the IRM. Exceptions will be approved only if the business need justifies any additional risk or resource requirements.

SOFTWARE

Software Developed by TCEQ

TCEQ software development and acquisition projects adhere to the agency's Process Asset Library (PAL), a centralized repository of processes, practices, tools, and templates. The PAL adheres to DIR's Project Delivery Framework, Project Management Institute's Project Management Body of Knowledge, and the Software Engineering Institute's standards and processes. Agency staff assigned to manage IT projects and develop software are required to follow the PAL. This ensures a consistent model by which IT projects are managed and IT products are developed and acquired.

Purchased Major Applications

Projects that purchase major applications also follow the appropriate software development industry standard methodologies and the agency PAL suitable to the scale of the projects.

Software Development and Application Tools

Requirements for software development and application tools are defined by IRD. Tools must conform to the architecture defined by IRD and must be approved by the IRM.

Desktop Software

To minimize support requirements and reduce costs through site licenses, a standard suite of office software and some other standard programs are specified by the IRM. Most such software is configured and installed using automated tools.

DATA AND INFORMATION

The responsibility for data quality lies with the program organization, regardless of whether the information is produced from or collected by IT Systems. During software development, the requirements for data quality are captured, and the inspection and testing procedures ensure that the software delivered meets those requirements.

Staff throughout the agency implementing Geographic Information Systems (GIS) follow DIR and Texas Geographic Information Office quality standards for GIS data.

TCEQ has an Information Security Program in accordance with Title 1, TAC Chapter 202 to ensure the confidentiality, integrity, and availability of agency data and information.

TCEQ has an Accessibility Program in accordance with Title 1, TAC Chapters 206 and 213, ensuring the availability of electronic and information resources/information and communication technology to all staff and the public, regardless of ability or disability.

CHANGE MANAGEMENT

Changes to hardware and software configurations are controlled by change management processes. For systems managed by the Data Center Services provider, the service provider takes primary responsibility for change management with participation and approval of agency personnel. For systems managed by the agency, agency personnel take primary responsibility.

Change management processes, whether managed by the agency or by the service provider, include the following steps:

1. Identify all the components required for the change.
2. Develop a detailed technical plan for the change.
3. Develop a proposed schedule for the change, including arranging for required personnel.
4. Gain applicable change management approval.
5. Notify affected parties.
6. Implement the change at the scheduled time, following the technical plan.
7. Verify and record the outcome of the change implementation.

The technical plan for the change includes the following elements:

- The actions the team will take to implement the change;
- Test plans the team will execute to tell whether the change was successful and all components are back in correct operation; and
- Recovery processes to repair problems or back out of the change if one or more of the tests fail.

Integrity of systems during changes, including hardware, software, data, and communications systems, is the responsibility of one or more of the following: project team and sponsors, maintenance review teams, application change control boards, and program area IT representatives.

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7. PLANNING

Environmental programs shall be planned in accordance with state and federal laws and rules, agency policies and procedures, and contractual requirements.

REQUIREMENTS

Organizational and programmatic requirements concerning environmental programs are defined in statutes enacted by the Texas Legislature and Congress, rules promulgated by TCEQ and federal agencies, and agency policies and procedures (negotiated specifications that support and/or enable business processes). These documents determine goals, establish stakeholder and customer relationships, and define needs and expectations for environmental programs implemented by TCEQ. In some cases, foreign laws and international agreements such as the United States-Mexico-Canada Agreement and the La Paz agreement create requirements for quality assurance related to monitoring activities in Mexico that benefit the State of Texas.

SPECIFICATIONS

Environmental programs and projects are planned through the development of the agency strategic plan, organizational business plans and budgets, PPAs, grant work plans, QAPPs, SAPs, QAPs, assessment plans, and contracts executed by TCEQ and external organizations. These documents translate requirements and expectations into measurable specifications, commitments, and performance criteria.

CAPITAL, COST, AND SCHEDULE CONSTRAINTS

Capital outlay and cost and schedule constraints are taken into consideration during the development of the TCEQ strategic plan, the biennial operating plan, the biennial budget request to the Texas Legislature, and negotiations for federal assistance agreements. Funds and capital outlay for environmental programs are appropriated on a biennial basis by the Texas Legislature and allocated annually by TCEQ management during preparation of the agency operating budget.

PROJECT PLANNING

Projects involving the generation, acquisition, and use of environmental data shall be planned through the development of QAPPs, SAPs, QAPs, CWQMN project plans, or other planning documents. These documents shall be developed by project managers, QA staff, technical staff, management, and contractors using a systematic planning process, such as the DQO process, as defined in *Guidance for the Data Quality Objectives Process*, EPA QA/G-4, or comparable alternative.

DQOs may be applied to most data collection activities associated with a project or program. In particular, DQOs should encompass the total uncertainty resulting from sampling and analysis activities. From an analytical perspective, a process of developing the analytical data requirements from DQOs of a project is essential. These analytical data requirements serve as measurement performance criteria or objectives of the analytical process and are often referred to as measurement quality objectives (MQOs).

Radiochemistry projects employ MARLAP, NUREG-1576. The MARLAP Manual provides guidance on developing MQOs from the overall project DQOs during project planning for select method performance characteristics, such as: method uncertainty at a specified concentration; detection capability; quantification capability; specificity, or the capability of the method to measure the analyte of concern in the presence of interferences; range; and ruggedness.

Underground Injection Control (UIC) projects, including those that involve radionuclides, will follow planning and procedures designated in the Resource Conservation and Recovery Act (RCRA)/UIC QAPP.

Environmental data collection or measurement activities in Mexico shall only be planned in consultation with Mexican government stakeholders and U.S. federal partners consistent with TCEQ Memoranda of Cooperation with neighboring Mexican states; the Agreement Between the United States of America and the United Mexican States on Cooperation for the Protection and Improvement of the Environment in the Border Area; The U.S.-Mexico Border Environmental Program: Border 2025; and Chapter 24 of the United States-Mexico-Canada Agreement.

TCEQ project planning activities (e.g., planning meetings) are intended to:

- identify users;
- ensure that data collected are of the type and quality appropriate to their intended use;
- generate the sampling design (e.g., what, when, where, and how to collect samples);
- ensure data management processes and procedures are documented (e.g., data coding, submittal, receipt, review, verification, validation) to ensure acquired (existing) data will be appropriate for their intended use; and
- optimize the data collection effort by promoting communication and gathering input from all involved parties.

QAPPs shall conform to requirements contained in *EPA Requirements for Quality Assurance Project Plans*, EPA QA/R-5. Other project planning documents will conform to program requirements which include adherence to the principles of EPA QA/R-5.

8. IMPLEMENTATION OF WORK PROCESSES

Environmental programs shall be conducted so as to ensure that customer needs and requirements are met, and products and results are produced in a timely manner. Environmental programs conducted by or on behalf of TCEQ shall be implemented in accordance with approved plans. Exceptions, deviations, and changes to these plans shall be approved and documented prior to implementation.

TCEQ ensures environmental work is performed according to plan through the following:

- implementation of a formal QA program;
- program and project planning;
- staff development and training; and
- ongoing oversight of performance.

The quality system implemented by TCEQ is described in Sections 1 and 2 and elsewhere in this QMP. Program and project planning inputs, processes, and results are described in Sections 5 (QA documents and records) and 7 (customer requirements, specifications, cost and schedule constraints, and project planning) of the QMP. Staff development and training activities are described in Section 3 of the QMP. Assessment and response (oversight) programs implemented by TCEQ are described in Sections 9 and 10 of the QMP.

IMPLEMENTATION SCHEDULE

The agency's QMP is revised annually or more frequently, if necessary. Annual and multi-year QAPPs are prepared and revised as necessary according to Appendix G. The QA Manager shall monitor the status of QAPPs and shall report to the Program Manager (Appendix D) within 15 days of discovering any environmental data operations that do not have current, approved QAPPs.

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9. ASSESSMENT AND RESPONSE

An assessment and response program designed to measure the effectiveness of the agency quality system shall be developed and implemented. Assessment results will be reported to appropriate management, supervisory, and other personnel for review and action as necessary. Follow-up actions will be taken where appropriate.

Environmental grant, program, and project managers maintain regular contact with participating organizations and staff as well as customers. Environmental work activities are reported to division, office, and executive management on a monthly basis or at other intervals as required. The results of these work activities are measured by TCEQ and external organizations against specifications contained in approved plans on a semi-annual and annual basis through reports prepared by these individuals and others.

TCEQ has also implemented formal assessment programs for the environmental programs listed in Appendix A.

ASSESSMENTS

Assessments may be used to determine or assist in determining:

- adequacy - whether an item or activity meets requirements;
- compliance - whether an item or activity is being implemented as specified;
- readiness - whether the status of an item or activity warrants start-up or continued use of a facility, process, or activity;
- effectiveness - whether an item or activity achieves desired results; and
- verification - whether corrective action has been planned, initiated, or completed.

TCEQ has defined the following ten types of assessments:

- readiness reviews;
- surveillances;
- inspections;
- quality system audits (QSAs);
- management systems reviews (MSRs);
- technical systems audits (TSAs);
- peer reviews;
- technical reviews;
- data quality assessments; and
- audits of data quality.

ASSESSMENT PLANNING

QA assessments are planned and documented in accordance with TCEQ OPP 18.09.1. Appendix C of this document outlines responsibilities for planning assessments.

ASSESSMENT CONDUCT

QA assessments are conducted in accordance with OPP 18.09.2 and/or with approved program SOPs. Appendix C of this document outlines responsibilities for scheduling and conducting assessments.

REVIEW AND EVALUATION OF ENVIRONMENTAL DATA

Environmental data acquired by the programs listed in Appendix A shall be evaluated and approved prior to use. The data used by those programs shall be assessed against the DQOs defined in the QAPP, SAP, and/or other project planning document, and the data quality shall be known and documented. These data include data acquired under QAPPs or equivalent planning documents, as well as data acquired or generated outside an approved QAPP or QA program.

Data review, and, if applicable to project requirements, data validation procedures shall be documented in the appropriate QAPP. The detail of these procedures shall document the decision process, the factors governing the qualification of data, and the meaning of any codes used to qualify data. The decision to qualify the data for their intended use shall be based on reconciliation with the performance measures for the project defined by the data quality requirements. Any limitations on data use shall be identified quantitatively to the extent practicable and fully documented.

The evaluation of data shall be performed to document that the data acquired by the programs listed in Appendix A are of sufficient and documented quality to meet the project objectives defined in the QAPP, SAP, and/or equivalent planning document. The assessment of data shall include the correct application of statistical methods as appropriate during the assessment process.

PEER REVIEW OF PROJECT REPORTS

Reports containing environmental data or reporting the results of environmental data operations shall be independently reviewed and approved prior to publication and formal distribution. The reports and method(s) of review, approval, and distribution shall be identified in the appropriate QAPP.

Environmental data included in any report are subject to later revisions following publication and formal distribution. These revisions are unavoidable artifacts of the continuous data quality assurance process. TCEQ staff will make every effort to maximize confidence in reports containing environmental data. The reports will be technically sound and coherent.

EPA ASSESSMENTS

EPA-sponsored programs are subject to review at any time. Formal assessment of performance under EPA assistance agreements occurs as part of a comprehensive review and evaluation of TCEQ programs. The process is governed by EPA's Policy on Oversight of Delegated Environmental Programs, which states evaluations should focus on overall program performance, rather than individual actions and should be based on objective measures and standards agreed to in advance. This policy provides a framework within which EPA and TCEQ can clarify performance expectations and solve problems through a system of negotiation according to a predictable but flexible set of national guidelines. The policy describes the components of assistance agreements and how they are to be

negotiated, lays out EPA's expectations for the review and evaluation of assistance agreements and escalation of significant findings, and describes how EPA will respond to the findings. The latter includes rewarding strong performance, applying corrective action to solve problems, escalating significant conflicts to top management, and, in cases of persistent performance problems, imposing sanctions.

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10. QUALITY IMPROVEMENT

Quality system deficiencies shall be prevented wherever possible. Identified deficiencies shall be documented and corrected in a timely manner. Corrective actions will be verified to ensure timely and effective implementation. Efforts will be made to improve quality systems continually.

Systems, documents, and tools described in preceding sections summarize the approach taken by TCEQ to plan, organize, implement, document, monitor, and assess quality systems for environmental programs. All personnel working on environmental programs are encouraged to identify, plan, implement, document, and evaluate quality improvement activities for their areas of responsibility. Personnel should prevent quality problems wherever possible, report problems as they occur, and identify opportunities for improvement.

DEFICIENCIES AND CORRECTIVE ACTIONS

TCEQ has not adopted written agency OPPs governing quality system deficiencies and corrective actions. The following paragraphs describe existing agency practice and standards.

Identification of Quality System Deficiencies

A deficiency is defined as any unauthorized deviation from acceptable procedures or practices, a defect in an item, or failure to conform with a specified requirement.

Deficiencies shall be documented immediately and reported to supervisory personnel in writing. The reports of deficiencies to supervisory personnel will serve as initial deficiency notices. Supervisory personnel shall forward initial deficiency notices to the appropriate project manager and lead QA staff. Lead QA staff shall determine whether or not deficiencies are significant conditions as defined in Appendix H of the QMP, including cases in which deficiencies recur after having been identified and previously corrected. Project, program, and organizational managers may also determine whether deficiencies are significant conditions. Lead QA staff shall notify affected Deputy Directors, Section Managers, Grant and Program Managers, and the QA Manager of any significant conditions. If lead QA staff and project, program, or organizational management disagree as to the determination of significant conditions for a deficiency, any of the parties may appeal to the TCEQ QA Manager for resolution.

Planning and Implementing Corrective Actions

With the concurrence of affected lead QA staff, project managers or designees shall prepare a corrective action plan (CAP) to determine and document the following with regard to each deficiency:

- root cause(s);
- programmatic impact;
- required corrective action(s);
- required corrective actions(s) to prevent recurrence;
- means by which corrective actions will be verified as effective;
- means by which corrective action completion will be documented;
- timetable(s); and
- individual(s) responsible.

Within 30 days of the initial deficiency notice, the project manager or designees shall forward copies of CAPs to supervisory and lead QA staff (Appendix D) involved in implementing or monitoring corrective actions. Lead QA staff shall forward copies of CAPs concerning significant conditions to affected Deputy Directors, Section Managers, Grant and Program Managers, and the QA Manager. Supervisory staff shall ensure CAPs are implemented effectively and in a timely manner.

Lead QA staff may monitor the implementation of CAPs and shall advise the appropriate project and program manager if the plans are not implemented in a timely manner. In the case of significant conditions, lead QA staff shall advise the appropriate Section Manager, Deputy Director, and the QA Manager if CAPs are not implemented in a timely manner.

Depending upon program requirements, either the project manager or QA staff will notify affected management and lead QA staff when corrective actions have been completed and verified to be effective, and that the associated CAP(s) can be closed. In the case of significant conditions, lead QA staff shall advise the Project Manager, Program Manager, appropriate Section Manager, Deputy Director, and QA Manager when corrective actions have been completed and verified to be effective, and that the associated CAP(s) can be closed.

Trend Analysis and Annual Reporting

At least annually, lead QA staff (Appendix D) shall review quality-related deficiencies, and programmatic improvements and advise the affected Project Manager, Program Manager, lead division Deputy Director, and QA Manager of any significant trends. The QA Manager will assess the information provided by lead QA staff as part of the annual QA Management System Review (MSR).

At least annually, the QA Manager shall advise the Executive Director of any significant trends affecting the agency QA program. Annually, the QA Manager shall also provide the Executive Director and EPA Region 6 QA Manager with a report describing the status of the QA program, as determined from the results of the MSR.

STOP WORK ORDERS AND WORK SUSPENSIONS

The Executive Director and Directors, or designees, are authorized to stop or suspend work as necessary to safeguard programmatic objectives, worker safety, public health, and environmental protection.

The Executive Director or his designees may refuse to accept data and analyses from laboratories or other data-producing entities to maintain compliance with programmatic requirements and specifications. The commission may suspend or revoke the accreditation of a laboratory which no longer satisfies requirements for accreditation.

OUTREACH AND ASSISTANCE

The QA Manager will maintain a close liaison with lead QA staff and may meet at least annually with EPA and TCEQ offices concerning QA matters. Lead QA staff will provide technical assistance to regulated entities as time and resources permit and to the public and agency staff when requested.

**Appendix A:
APPLICABLE PROGRAMS; REGULATORY REQUIREMENTS AND GUIDANCE
DOCUMENTS**

APPLICABLE PROGRAMS

TCEQ has implemented a formal QA program for environmental operations related to the programs described below.

Air Quality: Federal Clean Air Act (FCAA), Sections 103(b) and 105; Texas Legislature; National Nuclear Safety Administration Act; Texas Disaster Act; Texas Health and Safety Code, Subtitles C & D

- Community Air Toxics Monitoring Network and State Initiative Monitoring Network
- National Emissions Inventory
- Pantex Nuclear Weapons Facility Ambient Air Monitoring
- Particulate Matter 2.5 Ambient Air Monitoring Network
- Photochemical Assessment Monitoring Stations Network
- State or Local Air Monitoring Stations Network

Waste: Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA); Resource Conservation and Recovery Act (RCRA); Atomic Energy Act (AEA); Underground Injection Control (UIC) – Safe Drinking Water Act (SDWA)

- Brownfields (CERCLA-Brownfields Amendments)
- Federal Superfund (CERCLA)
- Industrial and Hazardous Waste (IHW) Program (RCRA Subtitle C)
- Leaking Underground Storage Tanks Program (RCRA Subtitle I)
- Preliminary Assessment/Site Inspection Program (CERCLA)
- Radioactive Materials and Uranium Licensing (NRC Agreement State Program)
- UIC Program (Though program is authorized by the SDWA, hazardous waste functions must also meet rules of the RCRA IHW program.)

Water Quality: Clean Water Act (CWA), Sections 106, 303, 305, 319, 320, and 604; Texas Clean Rivers Act

- Clean Rivers Program
- Coastal Bend Bays and Estuaries Program
- Continuous Water Quality Monitoring Network
- Galveston Bay Estuary Program
- Groundwater Assessment
- Nonpoint Source Program
- Surface Water Quality Monitoring
- Total Maximum Daily Load Program
- Water Quality Assessment
- Water Quality Standards

Public Drinking Water: Safe Drinking Water Act and Water Infrastructure Improvements for the Nation Act Section 2107

- Public Water System Supervision
- Lead Testing in School and Child Care

U.S.-Mexico Border Program: The Agreement Between the United States of America and the United Mexican States on Cooperation for the Protection and Improvement of the Environment in the Border Area; The U.S.-Mexico Border Environmental Program: Border 2025; Chapter 24 of the United States-Mexico-Canada Agreement; and TCEQ Memoranda of Cooperation with neighboring Mexican states.

- Border Initiative
- Border 2025
- Administrative Fund for Air Quality Monitoring in the Paso del Norte Air Basin

Other Programs

- Analytical Method Modification Program
- Field Operations
- Laboratory Accreditation

The following paragraphs describe the scope of TCEQ QA programs in greater detail.

Air Quality

Community Air Toxics Monitoring Network (CATMN) and State Initiative Monitoring (SIM) Network

These monitoring efforts, funded by the State of Texas, primarily involve collecting samples of volatile organic compounds (VOCs), continuous particulate matter of 10 micrometers or less in diameter (PM₁₀), total non-methane organic compounds (TNMOC), hydrogen sulfide (H₂S), and related meteorological information for designated sites. The CATMN program was the agency's response to public concern about airborne toxic pollutants and a mandate for community toxics monitoring from the Texas Legislature. The primary goal of the CATMN program is to determine community exposure to toxic organic compounds and their potential to cause long-term health effects. SIM monitors provide air quality data for areas of interest or concern, beyond federal requirements.

National Emissions Inventory (NEI)

The NEI is the current official electronic repository for emissions inventory data submitted to EPA as required by the federal Air Emissions Reporting Requirements. The NEI stores emissions data for every county in the state on all components of the inventory: point sources, area sources, on-road mobile sources, non-road mobile sources, and biogenic sources. Automated reporting to the NEI occurs every year for major point sources and every three years for area sources, on-road mobile sources, and non-mobile sources with the submittal of the Periodic Emissions Inventories. Emissions data submitted to the NEI are available on an EPA public website.

Pantex Nuclear Weapons Facility Ambient Air Monitoring

This program involves air quality monitoring in the vicinity of the Pantex facility. The TCEQ conducts this monitoring under contract with the U.S. Department of Energy through the Texas Governor's Office.

Particulate Matter 2.5 (PM_{2.5}) Ambient Air Monitoring Network

Activities for this program support the statewide monitoring of particulate matter of 2.5 micrometers or less in diameter. The primary goal of the program is to compare the PM_{2.5} concentrations collected, as mass, to the annual and 24-hour National Ambient Air Quality Standard (NAAQS). The network consists of sequential and continuous monitors deployed statewide, operating continuously or on either a daily, every-third-day, or every-sixth-day schedule.

Photochemical Assessment Monitoring Stations (PAMS) Network

The PAMS network consists of ambient air monitoring stations that collect data for ozone (O₃), its precursors, and associated meteorological parameters in nonattainment areas classified as serious, severe, or extreme. Ambient analyses of O₃ and O₃ precursors are used to make attainment/nonattainment decisions; aid in tracking VOCs, non-methane organic compounds (NMOC), carbonyl, and oxides of nitrogen (NO_x) emission inventory reductions; better characterize the nature and extent of ambient O₃ concentrations; and determine air quality trends. In addition, data from the PAMS network provide an improved dataset for evaluating photochemical model performance, especially for future control strategy mid-course corrections as part of the continuing air quality management process.

State or Local Air Monitoring Stations (SLAMS) Network

The SLAMS network and the federally-funded portions of Texas border monitoring activities are performed by the TCEQ and five local agencies in Dallas, El Paso, Fort Worth, Galveston County, and Houston to determine compliance with the NAAQS. SLAMS monitoring includes the federal criteria pollutants: O₃, carbon monoxide (CO), sulfur dioxide (SO₂), nitrogen dioxide (NO₂), lead (Pb), particulate matter of 10 micrometers or less in diameter (PM₁₀), and particulate matter of 2.5 micrometers or less in diameter (PM_{2.5}).

Waste

Brownfields

The federally-funded Brownfields program is responsible for working in partnership with stakeholders and with the EPA and other federal, state, and local redevelopment agencies to facilitate cleanup, transferability, and revitalization of former industrial properties that are dormant or underutilized due to liability associated with real or perceived contamination. Cleanup, transferability, and revitalization of these brownfields are accomplished through the development of regulatory, tax, and technical assistance tools. The Brownfields program also is available to provide local governments and non-profit organizations with technical advice, education, and project partnering for brownfields redevelopment projects.

Federal Preliminary Assessment/Site Inspection and Superfund

The federally-funded Preliminary Assessment/Site Inspection (PA/SI) and Superfund programs are responsible for conducting or overseeing the assessment, inspection, investigation, and remediation of sites posing an unacceptable risk to public health and safety or the environment. The TCEQ staff either assists the EPA or takes the lead in project management of site assessments, site inspections, remedial investigations, feasibility studies, remedial design, and remedial actions. Activities at federal Superfund sites in the operation and maintenance phase are 100% state-funded and do not require EPA approval.

Leaking Underground Storage Tanks

The federally-funded Leaking Underground Storage Tanks (LUST) program has two components: prevention and corrective action. The prevention program requires a compliance investigation at every underground storage tank on a three-year cycle. The compliance investigations may include Global Positioning System (GPS) data collection. The corrective action program oversees the investigation and remediation of sites where releases of petroleum products from underground storage tanks have occurred. Activities include conducting site contamination assessments, remedial action feasibility studies, and environmental and human health assessments; developing remedial action procedures; executing remedial actions; and documenting the effectiveness of remediation.

Radioactive Materials (RM)

Texas is an Agreement State through the U.S. Nuclear Regulatory Commission Agreement State Program. This authority is shared between TCEQ and the Texas Department of State Health Services. The Texas Railroad Commission also administers a state program for oil-and-gas NORM that is not part of the Agreement State Program.

TCEQ's RM Section regulates disposal of radioactive substances, including low-level radioactive waste and non-oil and gas naturally occurring radioactive materials (NORM) through a licensing program. The licensing for disposal of low-level radioactive waste, certain by-product material, and processing and storage of radioactive waste is covered under 30 TAC Chapter 336, Radioactive Substance Rules. The licensing program also regulates legacy radioactive waste burial sites and the decommissioning of these facilities.

The RM Section also licenses and regulates radioactive material processing facilities associated with *in-situ* uranium mines. The licensing program work is comprehensive, ranging from environmental assessment work conducted prior to license issuance, and in-depth technical review of license amendments granted during the course of uranium production and processing, to site reclamation and restoration, collectively known as decommissioning. The program also covers reclamation and groundwater protection of older, traditional uranium milling sites associated with surface mines that were developed prior to the use of *in-situ* mining techniques.

The CID Radioactive Materials Compliance Team is responsible for conducting compliance investigations at uranium mining facilities, low-level radioactive waste storage and processing facilities, and low-level radioactive waste disposal facilities. In

addition, the CID conducts groundwater, soil, and vegetation sampling at these facilities for compliance purposes, when needed.

Resource Conservation and Recovery Act

Resource Conservation and Recovery Act (RCRA) program responsibilities include: promoting activities that reduce or eliminate industrial and hazardous waste generation; ensuring that remaining waste is properly identified, managed, and safely disposed; expediting the closure and cleanup of contaminated sites; collecting and reporting data on hazardous waste generation, receipt, treatment, storage, and disposal; reviewing permit applications and writing permits; and conducting compliance monitoring and enforcement activities.

Underground Injection Control (UIC)

The UIC Program is responsible for implementing state and federal mandates to prevent contamination of underground sources of drinking water by regulating the underground injection of fluids through wells. The TCEQ UIC Program regulates Class I industrial and municipal waste disposal wells, Class III injection wells for solution mining of uranium, Class IV shallow hazardous and radioactive injection wells (generally prohibited), and Class V wells for injection of non-hazardous fluids into or above underground sources of drinking water, which include wells used for aquifer storage and recovery projects in addition to aquifer recharge projects. The UIC Program reviews permit applications and writes permits; oversees phases of well construction, tests, remedial work, and closure; conducts compliance monitoring and participates in enforcement processes; maintains inspection and compliance data; and collects and reports data as required by federal regulations.

The CID Radioactive Materials Compliance Team is responsible for conducting compliance investigations at the UIC permitted facilities with Class III wells used for *in-situ* mining under TCEQ's jurisdiction.

Water Quality

Clean Rivers Program

In 1991, the Texas Legislature enacted Texas Water Code Section 26.0135, the Texas Clean Rivers Act, which provides for strategic and comprehensive monitoring, and periodic assessment, of water quality. The Texas Clean Rivers Act established the Texas Clean Rivers Program (CRP). The goals of this program are to maintain and improve the quality of water within each river basin in Texas through an ongoing partnership involving the TCEQ, river authorities, other state agencies, regional entities, local governments, industry, and citizens. Through the program's watershed management approach, the agency and partners identify and evaluate water quality issues, establish priorities for corrective action, work to implement those actions, and adapt to changing priorities. Because of the program's holistic watershed stewardship responsibilities, the program partners serve as a hub for water quality information and coordination efforts within their respective watersheds.

Work is targeted to long-term monitoring with intensive studies being conducted for water quality priorities when possible and necessary. The partners primarily collect

data to determine compliance with the Texas Surface Water Quality Standards; however, program priorities also include providing data to identify significant long-term water quality trends, characterize water quality conditions, support the permitting process, and classify unclassified waters.

Coastal Bend Bays and Estuaries Program; Galveston Bay Estuary Program

Both the Coastal Bend Bays and Estuaries Program (CBBEP) and the Galveston Bay Estuary Program (GBEP) are continuations of programs initiated under the National Estuary Program established under the CWA, Section 320. The management conferences of these programs, comprising state and federal agencies, local governments, scientists, and citizen organizations, developed Comprehensive Conservation and Management Plans (CCMP) designed to guide the protection and restoration of the Galveston Bay and Coastal Bend Bays (Corpus Christi and adjacent areas) coastal watersheds.

The programs are charged with overseeing implementation of the Plans, which includes continuing efforts to monitor and improve water and sediment quality, as well as efforts to protect and restore wetlands. The programs also conduct outreach and education activities to increase awareness, communicate improvements, and advocate conservation.

Officially established in 1989, the GBEP is a non-regulatory program administered by the TCEQ. In 1999, the Texas Legislature passed the Texas Estuaries Act (House Bill 2561; Senate Bill 708). The purpose of the Act was to recognize estuaries of national significance on the Texas coast and to authorize the use of state funds to implement Comprehensive Conservation and Management Plans. Through this legislation, the TCEQ, formerly the Texas Natural Resource Conservation Commission (TNRCC), was designated as the lead administrator of the GBEP. The Galveston Bay Council (GBC) is an official advisory committee to the TCEQ for the GBEP. The GBC was created by resolution of the TCEQ on November 21, 1995 and extended to November 16, 2035 by the TCEQ on March 27, 2019.

Originally a joint program administered by TCEQ and EPA, the CBBEP became a non-profit organization led by a local Board of Directors in 1999. A mix of local governments, private industry, and state and federal agencies provide program funding. CBBEP receives state funding through an annual direct-award contract with TCEQ.

Continuous Water Quality Monitoring Network

The Continuous Water Quality Monitoring Network (CWQMN) provides near-real-time water quality data for selected high priority water bodies in the state. TCEQ CWQMN stations include those operated by TCEQ or the United States Geological Survey (USGS). CWQMN monitoring data may be used by the TCEQ or other entities to make water resource management decisions, target TCEQ field investigations, evaluate the effectiveness of water quality management programs such as Total Maximum Daily Load (TMDL) implementation plans and watershed protection plans, characterize existing conditions and evaluate spatial and temporal trends, and confirm water quality standards compliance. Stations are programmed to collect water quality data on a continuous basis and to transmit the data to TCEQ and USGS web pages. Current

CWQMN measurement parameters include temperature, dissolved oxygen, dissolved oxygen % saturation, pH, specific conductance, total dissolved solids, turbidity, and sample depth. Stream discharge is also measured at some USGS-operated stations.

Groundwater Assessment

Staff in this program are responsible for crafting the Texas Groundwater Protection Strategy and administering the interagency Texas Groundwater Protection Committee. These activities include program coordination, monitoring coordination, water quality assessment, special projects, and public participation and outreach. Staff prepare the annual Groundwater Monitoring and Contamination Report and support and coordinate the interagency development and implementation of the state's Generic State Pesticide Management Plan under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) and 106 Groundwater grant programs under the Performance Partnership Grant (PPG). Staff also administer the state's Priority Groundwater Management Area Program, provide limited oversight of groundwater conservation districts relating to the adoption and implementation of management plans, process and review landowner petitions for groundwater conservation district creation, and provide reports and legislative support for groundwater management and groundwater conservation district activities.

Nonpoint Source Program

The Nonpoint Source (NPS) Program is responsible for water quality management planning and coordinating the management of urban and non-agricultural/silvicultural nonpoint sources of pollution in the state. In accordance with the CWA Section 604(b) grant, the NPS program funds water quality management planning projects with area-wide agencies. In accordance with the CWA Section 319(h), the NPS program develops and implements watershed-based plans designed to reduce nonpoint source pollution and enables the TCEQ NPS Program to fulfill the long and short-term goals (data collection and assessment, implementation, and education) identified in the State of Texas NPS Management Program.

Surface Water Quality Monitoring

The Surface Water Quality Monitoring (SWQM) program provides for an integrated evaluation of physical, chemical, and biological characteristics of aquatic systems in relation to human health concerns, ecological conditions, and designated uses. The program coordinates the collection of routine surface water quality data from more than 1000 sites statewide, including the collection of physicochemical, biological, and hydrological data at varying frequencies. Basic components of the SWQM program include a routine monitoring network, continuous monitoring network, seagrass monitoring, biological monitoring, and special studies. Water quality data obtained through these components are stored in the Surface Water Quality Monitoring Information System (SWQMIS). The monitoring results may be used by TCEQ to characterize existing conditions, evaluate spatial and temporal trends, determine water quality standards compliance, identify emerging problems, and evaluate the effectiveness of water quality control programs.

Total Maximum Daily Load

The Total Maximum Daily Load (TMDL) program is responsible for restoring water quality in impaired water bodies in Texas by establishing loading limits for pollutants of concern identified on the CWA 303(d) List. Projects managed by the program address data collection, modeling, public participation, and TMDL development. The program oversees the development of a formal plan to implement the control and management measures needed to restore water quality. The TMDL program contracts with other state agencies, river authorities, universities, and private entities to conduct the statewide projects.

Water Quality Assessment

The Water Quality Assessment (WQA) program is responsible for implementation of the Texas Surface Water Quality Standards in accordance with the CWA and Texas Water Code. Projects managed by the program address determination of site-specific uses and criteria for the protection of human health and the environment, development of implementation procedures for the water quality standards, and other special studies related to water quality standards implementation. Studies addressing site-specific uses and criteria can include sampling of water chemistry, aquatic biota, physical habitat, and hydrologic conditions.

Water Quality Standards

The Water Quality Standards (WQS) program is responsible for the development of the Texas Surface Water Quality Standards in accordance with the CWA and Texas Water Code. Projects managed by the program address developing water quality standards, including determination of statewide and site-specific designated uses and criteria for the protection of human health and the environment, use attainability studies, and other special studies related to water quality standards development. Studies addressing water quality standards development can include sampling of water chemistry, aquatic biota, physical habitat, and hydrologic conditions.

Public Drinking Water

Public Water System Supervision Program (PWSSP)

This program conducts or oversees drinking water quality, operations monitoring, and compliance for public water systems. Activities include bacteriological and chemical monitoring, reviews of monitoring data to determine compliance with drinking water standards, vulnerability assessments of drinking water sources to chemical and microbiological contaminants, counterterrorism activities, source water protection; review of plans and exceptions for drinking water facilities; financial, managerial, and technical capacity development; and data management and reporting.

Lead Testing in School and Child Care (LTSCC) Program

Authorized under the WIIN Act Section 2107, the LTSCC is implementing a new statewide program to help eligible schools and child care programs conduct voluntary testing for lead in drinking water at their facilities. Objectives include increasing public awareness of the health effects of lead and sources of lead, reducing exposure to lead, and establishing routine practices. Participants will receive free training and

guidance, sampling materials and laboratory testing, corrective action recommendations, and help communicating with their community.

U.S.-Mexico Border Program

Border Initiative

The Border Initiative is a comprehensive, cooperative agency effort to serve border residents. The TCEQ oversees its own stand-alone activities and works with local, state, and federal stakeholders to maximize efforts aimed at improving the environment of the U.S.-Mexico border region.

U.S.- Mexico Environmental Program: Border 2025

The U.S.-Mexico Environmental Program Border 2025 is a five-year (2021-2025) binational effort designed to protect the environment and public health in the U.S.-Mexico border region. It includes four strategic goals: reduce air pollution; improve water quality; promote sustainable materials and waste management, and clean sites, and improve joint preparedness for and response to hazardous environmental emergencies.

Administrative Fund for Air Quality Monitoring in the Paso del Norte Air Basin (AQF)

This Administrative Fund is a first-of-its-kind mechanism to support long-term, sustainable operations and maintenance in support of the air quality monitoring network in Ciudad Juarez, to ensure continuous air quality information for the entire Paso del Norte Air Basin administered by the North America Development Bank. It will help enhance the binational air quality information system, health risk communication, and effectiveness of air improvement projects in the area. Per the Joint Advisory Committee resolution that created AQF, funds are available for Quality Assurance and an annual audit on the quality of the information provided by the monitoring stations in Juárez is required.

Special Projects

Special projects in the Border Program performed by TCEQ and contractors support the objectives set by the agency Border Initiative and the Border 2025 program, and support AQF. Projects can be multi-media and are typically funded 60% federal and 40% state. They include research, technical assistance, and binational collaboration on topics including air quality, water quality, and solid waste management in partnership with Mexican stakeholders and seek to harmonize quality assurance methodologies in the transborder region.

Other Programs

Analytical Method Modification

The Analytical Method Modification (AMM) program is designed to offer laboratories a process to obtain TCEQ and EPA (if necessary) approval for modifying methods and adjusting reporting limits. This approval is required for modifying procedures pertaining to analyses for programs mandated under the CWA or FCAA. TCEQ

Regulatory Guide RG-380, *The Analytical Method Modification Program - How to Apply*, provides procedures for requesting method modifications.

Field Operations

Field Operations' activities are conducted through 16 regional offices throughout the state and a central office at TCEQ headquarters. Field Operations' responsibilities include: ambient monitoring for local and statewide drinking water and surface water; conducting site visits for compliance determination and inspection at all permitted and registered air, water, and waste facilities in Texas; conducting investigations at permitted and non-permitted facilities and operations based upon citizen complaints; developing enforcement actions for documented air, water, and waste violations identified during inspections and/or complaint investigations; overseeing and ensuring compliance with water rights and allocating limited water resources in certain areas of the state when drought conditions exist; approving pollution abatement plans to protect underground water supplies; responding to emergency spills; and providing education and technical assistance to the community.

Laboratory Accreditation

The agency has implemented a laboratory accreditation program to provide formal recognition of environmental laboratories meeting standards established by the National Environmental Laboratory Accreditation Program (NELAP).

Laboratory data produced on or after July 1, 2008 that will be used to make environmental decisions must be provided by a laboratory that is accredited by TCEQ according to 30 TAC Chapter 25 (relating to Environmental Testing Laboratory Accreditation and Certification) Subchapters A and B as amended, for the matrices, methods, and parameters of analysis for which accreditation is available, or by a laboratory that is not required to be accredited according to Texas Water Code Section 5.134 and 30 TAC Section 25.6.

Laboratory data relating to compliance with the SDWA must be produced by a laboratory that is accredited by TCEQ according to 30 TAC Chapter 25 Subchapters A and B as amended, for the matrices, methods, and parameters of analysis for which accreditation is available, or by a laboratory approved under the TCEQ Public Drinking Water Program.

REGULATORY REQUIREMENTS AND GUIDANCE DOCUMENTS

Subject to any interpretations, limitations, and exceptions described elsewhere in this document, the TCEQ is committed to developing, implementing, and maintaining a quality system that meets the standards, requirements, and guidelines contained in the documents listed below:

American Society for Quality, American National Standard ASQ/ANSI E4:2014: Quality Management Systems for Environmental Information and Technology Programs - Requirements with Guidance for Use (February 2014).

The NELAC Institute, TNI Standard Volumes 1 and 2 (latest version).

- U.S. Environmental Protection Agency, EPA Quality Manual for Environmental Programs, CIO 2105-P-01-0 (May 2000).
- U.S. Environmental Protection Agency, EPA QA Field Activities Procedure, CIO 2105-P-02-0 (September 2014).
- U.S. Environmental Protection Agency, Policy to Assure Competency of Organizations Generating Environmental Measurement Data under Agency-Funded Assistance Agreements, Forum on Environmental Measurements, FEM 2012-02, Revision 1 (2013).
- U.S. Environmental Protection Agency, EPA Requirements for Quality Management Plans, EPA QA/R-2, (latest version).
- U.S. Environmental Protection Agency, Guidance for the Data Quality Objectives Process, EPA QA/G-4, (latest version).
- U.S. Environmental Protection Agency, EPA Requirements for Quality Assurance Project Plans, EPA QA/R-5, (latest version).
- U.S. Environmental Protection Agency, Guidance for Quality Assurance Project Plans, EPA QA/G-5, (latest version).
- U.S. Environmental Protection Agency, Guidance for Preparing Standard Operating Procedures (SOPs), EPA QA/G-6, (latest version).

Information about ANSI E4: 2014 is available from the American Society for Quality, 600 North Plankinton Avenue, Milwaukee, WI 53201, asq.org.

Access to information about the TNI Standard is provided at the TCEQ Laboratory Accreditation website, www.tceq.texas.gov/agency/qa/env_lab_accreditation.html.

EPA requirements and guidance documents may be viewed from the EPA QA website at www.epa.gov/quality.

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Appendix B: AGENCY, OFFICE, AND DIVISION MISSIONS

TCEQ MISSION

The TCEQ strives to protect our state's public health and natural resources consistent with sustainable economic development. Our goal is clean air, clean water, and the safe management of waste.

OFFICE AND DIVISION MISSIONS

Executive Director's Office

The mission of the Executive Director's Office (EXEC) is to plan and direct day-to-day operations of the TCEQ, including the development and implementation of the agency quality system. The Deputy Executive Directors serve as chief operating officers to assist the Executive Director in the administration of the agency.

The Executive Director's Office also has direct oversight of the following areas:

- External Relations
- Intergovernmental Relations
- Toxicology, Risk Assessment, and Research

The External Relations Division works to continuously improve and streamline the delivery of information to the public and within the agency. The division assists customers in preventing pollution, conserving resources, and achieving compliance through education, outreach, and technical customer assistance. The division answers questions about pending TCEQ permits, explains the permitting process, and helps the public learn of opportunities for public participation on permit applications. The division also manages Take Care of Texas, a statewide campaign that provides information on Texas' successes in environmental protection, encouraging Texans to help keep air and water clean, conserve water and energy, and reduce waste.

The Intergovernmental Relations Division (IGR) coordinates the agency's response to congressional and state legislative inquiries and constituent issues, legislative initiatives, and interim committee studies affecting the agency. IGR also coordinates the agency's testimony and participation during legislative sessions and ensures that the Legislature is informed of the TCEQ's initiatives and activities. Border Affairs in IGR is the agency point of contact for Mexico issues supporting the agency's mission in the border region, and manages contracts and special projects related to the PPG U.S.-Mexico Border Program.

The Toxicology, Risk Assessment, and Research Division helps the TCEQ make scientifically sound decisions by applying toxicological principles when evaluating environmental data, issuing authorizations, developing environmental regulations, and making policy decisions. TCEQ toxicologists identify chemical hazards, evaluate potential exposures, assess human health risks and communicate risk to the general public and stakeholders.

Office of Administrative Services

The mission of the Office of Administrative Services (OAS) is to provide exceptional support of the agency's mission through operational efficiencies and service excellence. These services include: strategic planning; operating budget and performance reporting; oversight of federal grants; information resources; human resource and staff development; records management; procurements and contracts; facility management; and financial administration. On fiscal matters, OAS is the point of contact for TCEQ's oversight agencies.

OAS includes the following divisions:

- Budget and Planning
- Financial Administration
- Information Resources
- Human Resources and Staff Services

The mission of the Budget and Planning Division is to promote fiscal responsibility by providing assistance and analysis in planning, administering, and monitoring the budget. The division manages the development of the agency's strategic plan, biennial appropriations request, the annual operating budget, and quarterly performance reports to the Legislature and the governor. The division is involved in bill implementation, preparing fiscal notes, and providing fiscal analysis and reporting. The division strives for continuous improvement in its business practices to support the agency's complex financial structure.

The mission of the Financial Administration Division is to manage the agency's finances, procurement and contracting, the development of the Annual Financial Report, and the Historically Underutilized Business function; monitor, estimate, and report revenue collections; ensure the integrity of the accounting records; and maintain adequate internal controls to safeguard the agency's financial assets and ensure the compliance of our fiduciary responsibility to the people of Texas.

The mission of the Information Resources Division is to provide information technology services through collaborative partnerships with its customers in support of clean air, clean water and safe management of waste.

The mission of the Human Resources and Staff Services Division is to provide quality products and services to enable the agency to recruit, hire, develop, and retain a diverse and competent workforce. The division's risk management program ensures a safe and secure workplace for agency employees and property. Additionally, HRSS administers TCEQ's fleet, asset, and facilities management programs, and provides mail delivery and copy services to support the agency's business operations and goals.

Office of Air

The Office of Air (OA) is composed of the Air Permits Division (APD), the Air Quality Division (AQD), and the Air Grants Division (AGD).

APD is dedicated to protecting human health, the environment, and the state's air resources through development and implementation of the New Source Review and Federal Operating Permit programs. APD provides New Source Review applicant reviews consistent with state and federal laws and regulations that result in technically sound and

economically reasonable authorizations to allow start of construction. APD conducts Federal Operating Permit reviews of applications for sources subject to Title V of the Federal Clean Air Act to codify all air requirements into one operating permit. APD also administers and maintains the Emissions Banking and Trading Programs.

The mission of AQD is to develop the State Implementation Plan (SIP) that implements FCAA requirements, including attainment demonstrations for criteria air pollutants and regional haze requirements. Consistent with this goal, the division develops and updates the emissions inventory for all stationary, mobile, and area sources of air contaminants.

In addition, AQD develops and implements the state's clean fuel (diesel and gasoline) programs; designs, administers, monitors, and evaluates the vehicle inspection and maintenance programs; administers the Tax Relief for Pollution Control Property program; and provides information and advice on voluntary mobile source emission reduction strategies. Further, the division manages air quality research to develop an improved understanding of air quality issues in Texas. Staff also provides information about the Toxics Release Inventory Program. The division also administers the air emissions and inspection fees program. This program funds the direct and indirect costs of the Federal Operating Permit program which includes the agency's air emissions inventory work, air permitting, field inspections, enforcement, air quality planning, air quality monitoring, and other related air programs.

AGD implements the Texas Emissions Reduction Plan (TERP) which provides incentive grants for projects to improve air quality in the state's nonattainment areas and other eligible counties of the state. The division administers the TERP programs, as authorized by the state legislature, to reduce nitrogen oxides (NO_x) emissions from mobile sources and encourage the use of alternative fuels for transportation in Texas. In addition, AGD administers the funds from the Volkswagen State Environmental Mitigation Trust.

Office of Compliance and Enforcement

The Office of Compliance and Enforcement (OCE) is dedicated to protecting human health and the environment by ensuring compliance with state and federal regulations. The Office seeks to promote voluntary compliance through a comprehensive program of regional investigations, technical assistance and outreach, environmental monitoring, appropriate enforcement, and laboratory accreditation. Through its homeland security efforts, the OCE works to prevent, protect, respond to and recover from natural and manmade disasters. Programs within the OCE take swift action that is fair, sensible, and responsive to the needs of the citizens of Texas.

OCE consists of the following divisions and regional areas:

- Critical Infrastructure (CID)
- Enforcement
- Monitoring
- Program Support and Environmental Assistance
- Regional Areas
 - ❖ Field Operations - Border and Permian Basin
 - ❖ Field Operations - Central Texas
 - ❖ Field Operations - Coastal and East Texas
 - ❖ Field Operations - North Central and West Texas

CID, in keeping with the State of Texas Homeland Security Strategic Plan, strives to achieve a safer, more secure, and more resilient state. To accomplish this, the division seeks not only to assure compliance with environmental regulations to protect public health and the environment, but also to provide support during disaster conditions for regulated critical assets that are essential for the state and its citizens.

The Enforcement Division is dedicated to protecting human health and the environment by enforcing state and federal regulations. The division is committed to enforcement that is responsive to the needs of the citizens of Texas. This division develops enforcement cases from investigations referred by Field Operations or other divisions of the agency. Division staff calculate penalties, determine technical corrective requirements and negotiate agreed enforcement orders.

The Monitoring Division provides TCEQ with the foundation for making sound, scientifically-based decisions for the protection of public health and the environment by ensuring the collection, analysis, and display of quality environmental data. The division oversees the Texas air quality monitoring program, which samples and analyzes the air in Texas and reports the results to the public and EPA. It supports a network of stationary monitors (that belong to the state, local governments, councils of governments, and private partners), labs that analyze samples, and short-term mobile monitoring of emission sources. The Monitoring Division generates data used for determining the causes, nature, behavior, and trends of air pollution; forecasting possible high concentrations of ozone and particulate matter; determining attainment with EPA air quality standards; informing Air Pollutant Watch List decisions; and evaluating impacts of air quality on human health. The Monitoring Division also promotes compliance with state and federal requirements by accrediting laboratories and coordinating the agency's QA program.

The Program Support and Environmental Assistance Division supports the regional offices by providing additional expertise in air, water, and waste compliance issues. They administer the On-Site Sewage Facility, Landscape Irrigation, and Clean Water Certification Programs to ensure protection of human health and the environment. These staff assist customers in preventing pollution, conserving resources, and achieving compliance through education, outreach, and technical customer assistance. The division also answers questions about pending TCEQ permits, explains the permitting process, and helps the public learn of opportunities for public participation on permit applications.

Regional Areas implement agency programs through investigating compliance at permitted, registered, and authorized air, water, and waste facilities located across the state and complaints at facilities and operations—permitted or not—from citizens, businesses and other organizations, or other concerned parties. The Regional Areas also provide environmental education and technical assistance for communities as needed, and monitor the quality of ambient surface water (rivers, lakes, and bays) and public drinking water.

Office of Legal Services

This Office manages legal services for the agency in environmental law, enforcement litigation, bankruptcy, and general agency operations. The Office provides legal counsel and support to the executive director, agency programs, and, along with the general counsel and the public interest counsel, the commissioners. The Office ensures that

commission decisions follow the law, and that any rules developed by the agency comply with statutory authority and are consistently applied.

The Environmental Law Division primarily supports the Offices of Air, Waste, and Water. This division provides legal counsel to the agency in all areas of permitting and rulemaking and represents the executive director in contested permitting matters in accordance with state law and agency rules regarding participation in hearings. The division's functions also include legal support related to federal program delegation, interpretation of environmental statutes and rules, and support for the Office of the Attorney General in state and federal court litigation.

The General Law Division serves as legal counsel to the agency on issues related to contracts, grants, procurement, employment law, and public-service ethics; processing and distribution of information for the public; and records retention. The division deputy director serves as the agency ethics advisor. The division also prepares administrative records for appeals under the Administrative Procedures Act and supports the Office of Legal Services with administrative personnel (paralegals and legal secretaries) and administers the RESTORE program. The division supports the agency administratively by coordinating rulemaking and preparing documents for publication in the Texas Register.

The Litigation Division is composed of two Enforcement sections, a Remediation section, and an Environmental Crimes section. The Enforcement sections provide legal representation and support to the Enforcement Division and Regional Areas and Regional Offices in the Office of Compliance and Enforcement, including negotiation of agreed enforcement orders, litigation of enforcement actions, and coordination of the Supplemental Environmental Projects and the Texas Environmental, Health, and Safety Audit Privilege programs. The Remediation section provides legal support to the Remediation Division of the Office of Waste, including negotiation of Superfund orders, recovery of cleanup costs, and ongoing legal support related to implementation of the agency's remediation programs. The Enforcement and Remediation sections also provide support for the Office of the Attorney General in state and federal court civil litigation. The Environmental Crimes section investigates and gathers evidence on environmental crimes for prosecution in state and federal courts.

Office of Waste

The Office of Waste implements federal and state laws related to the regulation of aboveground and underground petroleum storage tanks (PSTs); generation, treatment, storage, and disposal of municipal, industrial, low-level radioactive, and hazardous wastes; and the recovery and processing of uranium and disposal of byproduct. It also oversees state cleanup of contaminated sites.

The Office of Waste (OOW) is composed of the following divisions:

- Occupational Licensing and Registration
- Radioactive Materials
- Remediation
- Waste Permits

The mission of the Occupational Licensing and Registration Division is to protect our state's human and natural resources by providing efficient regulatory services and ensuring operational competency of individuals licensed and entities registered by TCEQ.

This includes 10 environmental occupational licensing programs and registration and reporting for industrial and hazardous waste, petroleum storage tanks, used oil, sludge transporters, dry cleaners, medical waste, aggregate production operations, television manufacturers' recycling registration, and enclosed containers.

The mission of the Radioactive Materials Division is to protect the public and the environment from unnecessary radiation exposure and contamination resulting from the possession and disposal of radioactive materials. This mission specifically encompasses the disposal of radioactive substances, including low-level radioactive waste, by-product material, *in-situ* leach mining of uranium, processing and storage of radioactive waste, and regulation of legacy radioactive waste burial sites. Through the U.S. Nuclear Regulatory Commission Agreement State Program, the division develops, interprets, and implements rules consistent with state and federal laws. The mission also includes coordination of special projects related to radiation and public health agency-wide, cooperation with other state and federal agencies, providing technical, regulatory and educational assistance on radiation issues to the public, the regulated community, and policymakers. In addition, the division manages the UIC program under the SDWA, which regulates the permitting, construction, operation, and closure of injection wells that place fluids underground for remediation, storage, or disposal to ensure protection of underground sources of drinking water.

The mission of the Remediation Division is to oversee the investigation and remediation of waste and pollutants released into the environment. Programs address issues involving petroleum storage tanks, municipal hazardous waste, industrial solid waste, voluntary cleanups, Brownfields initiatives, dry cleaners, and Superfund.

The mission of the Waste Permits Division is: "Facilitating the Safe Management of Waste in Texas." The Waste Permits Division is responsible for permitting and registering facilities that are involved in one or more of the following activities: storing, processing, or disposing of hazardous waste, non-hazardous industrial waste, municipal solid waste, special waste, and international waste. The division also performs technical analysis of notifications for waste management and submittals from regulated entities.

Office of Water

The Office of Water strives to protect the state's water resources consistent with sustainable economic development, working towards clean and available water.

The Office of Water (OW) consists of the following divisions:

- Water Availability
- Water Quality
- Water Quality Planning
- Water Supply

The Water Availability Division processes water rights permits and amendments; maintains water-availability models for all river basins; reviews water-conservation plans and drought contingency plans; performs groundwater quality planning and assessments; supports the interagency Texas Groundwater Protection Committee and the Texas Groundwater Protection Strategy; manages the state's plan for preventing groundwater pollution from pesticides and the state's program for the identification of priority groundwater-management areas; ensures compliance, through the watermaster programs, with water

rights by monitoring stream flows, reservoir levels, and water use; and, supports interstate river compacts.

The mission of the Water Quality Division is to protect water quality through the implementation of water quality standards; issue permits protective of human health and the environment; and achieve functional excellence. It is the goal of the Water Quality Division to process permits in an accurate and timely manner; respond early and accurately to meet internal and external assignments; communicate accurate, clear, and concise information between internal staff and to external customers; and retain, train, develop and reward quality staff.

The Water Quality Planning Division develops surface water quality standards, leads and coordinates statewide SWQM programs, verifies, validates, and manages all surface water quality data for the agency, prepares the CWA Section 303(d) List and 305(b) Report, manages the CWA Section 319(h) Nonpoint Source grants and the CWA Section 604(b) planning grant, and completes other surface water assessment activities. The division directly manages the CRP, the GBEP, the Sugar Land Laboratory, the NPS program, and the TMDL program, and contracts with a non-profit organization to administer the CBBEP. The division also coordinates the agency's participation in the implementation of the Texas Coastal Management Program.

The Water Supply Division (WSD) ensures the efficient administration of the production, treatment, delivery, and protection of safe and adequate drinking water, and also provides general supervision and oversight of water districts. The WSD is the lead division in overseeing the PWSSP, which conducts or oversees drinking water quality, operations monitoring, and compliance for public water systems. Activities of the division include bacteriological and chemical monitoring; reviews of monitoring data and documentation to determine compliance with drinking water standards; vulnerability assessments of drinking water sources to chemical and microbiological contaminants; counterterrorism activities; source water protection; review of plans and exceptions for drinking water facilities; financial, managerial, and technical capacity development; water district bonds review; miscellaneous application review; and data management and reporting. The WSD oversees the LTSCC program.

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Appendix C: PERSONNEL RESPONSIBILITIES

TCEQ PERSONNEL

All agency personnel are responsible for ensuring that items and services associated with environmental programs within their areas of responsibility meet the needs and expectations of the user and for implementing elements of the agency quality system. Individuals responsible for establishing or executing elements of the quality system may delegate portions of the work but will retain responsibility for the accomplishment of such work. Managers, supervisors, and other personnel shall, as appropriate, review and respond to any deficiencies, findings, or significant conditions related to their areas of responsibility. All personnel are responsible for discharging their duties in accordance with applicable plans and procedures, and for disseminating information of the highest quality, utility and integrity consistent with the spirit and intent of agency goals, philosophy and regulations.

EXECUTIVE DIRECTOR

The Executive Director is responsible for planning and managing TCEQ programs and operations, including the TCEQ quality system. The Executive Director reports to the commission. Deputy Executive Directors assist the Executive Director in planning and executing agency operations. Deputy Executive Directors report to the Executive Director.

DIRECTORS

Directors are responsible for planning, monitoring, evaluating, and improving environmental programs performed by, and quality systems implemented through, their respective offices. Directors are also responsible for ensuring that environmental programs produce the type and quality of results expected. Directors report to the Executive Director.

DEPUTY DIRECTORS

Deputy Directors are responsible for planning, monitoring, executing, evaluating, and improving environmental programs performed by, and quality systems implemented through, their respective divisions. Deputy Directors ensure that environmental programs (and associated work activities) performed within their organizations produce the type and quality of results expected. Assistant Deputy Directors assist the Deputy Directors in planning and executing division operations. Assistant Deputy Directors report to the Deputy Directors and Deputy Directors report to Directors.

SECTION MANAGERS, TEAM LEADERS, AND WORK LEADERS

Section Managers, Team Leaders, and Work Leaders are responsible for planning, monitoring, executing, evaluating, and improving quality-related work performed by, and quality systems implemented through, their respective sections and teams. Section Managers, Team Leaders and Work Leaders are also responsible for ensuring that environmental programs within their organizations produce the type and quality of results

expected. Generally, Section Managers report to Deputy Directors; Team Leaders report to Section Managers; and Work Leaders report to either Team Leaders or Section Managers.

QUALITY ASSURANCE MANAGER

The QA Manager is responsible for coordinating development and implementation of the TCEQ QA program. The QA Manager shall:

- coordinate the development, review, approval, and implementation of the agency QMP and agency-wide QA procedures;
- approve any exceptions to requirements contained in the agency QMP;
- maintain copies of approved QMPs;
- monitor the development and implementation of QMPs, QAPPs, and corrective actions resulting from MSRs, QSAs, and TSAs;
- develop training and certification programs for the QA Manager, QA specialists, laboratory auditors, and QA auditors;
- develop and provide training programs concerning the development, review, and implementation of QMPs and QAPPs;
- conduct MSRs, QSAs, and TSAs, and conduct or participate in other types of assessments as appropriate;
- communicate changes and additions to QA standards, policies and procedures to affected program areas;
- maintain a close liaison with the QA staff of federal oversight agencies;
- provide assistance in the area of QA to agency management, project managers, QA staff, regulated entities, and the public;
- ensure quality-related issues are addressed by the appropriate level of agency management as described in Section 1 of this QMP; and
- continuously encourage the development and awareness of QA within the TCEQ.

The QA Manager position is in the Laboratory and Quality Assurance Section of the Monitoring Division, and reports to the Executive Director on quality-related issues.

The Deputy QA Manager is responsible for tasks cited above in the absence of the QA Manager or as designated by the QA Manager.

QUALITY ASSURANCE SPECIALISTS

QA Specialists perform QA and quality control tasks including, but not limited to, the following:

- participate in the development, approval, implementation, and maintenance of written QA standards (e.g., QMPs, SOPs, QAPPs) as requested or necessary;
- assist grant, program, and project managers in developing and implementing quality systems;
- participate in the preparation of quality reports (e.g., annual reports);
- prepare and distribute annual assessment plans;
- determine conformance with program quality system requirements;
- determine the lead assessor for assessments;

- recommend to Deputy Directors and project managers, and through them to Directors, that work be stopped in order to safeguard programmatic objectives, worker safety, public health, or environmental protection;
- evaluate and concur with proposed corrective actions and the means by which corrective actions will be documented and verified;
- receive and maintain assessment records;
- monitor the implementation of corrective actions;
- identify positive and adverse trends in program quality systems;
- report on the status of corrective action programs;
- provide technical expertise and/or consultation on quality services;
- assess the effectiveness of program quality systems; and
- prepare and forward an annual QA report to the QA Manager.

QA Specialists may also perform some or all of the following QA and quality control tasks:

- coordinate the identification, disposition, and reporting to management of nonconforming items and activities;
- participate in data quality assessments;
- coordinate quality training; and
- serve as quality system representatives on special forums and committees.

QA Specialists report to Deputy Directors, Section Managers, or Team Leaders. Where they report to Section Managers or Team Leaders, QA Specialists have access to Deputy Directors as necessary to identify quality-related problems and ensure timely and effective corrective action.

PROGRAM MANAGERS

Program Managers are authorized to manage ongoing environmental programs and are accountable for the successful completion of program-related tasks and objectives. Program Managers perform the following tasks:

- maintain a thorough knowledge of program work activities, commitments, deliverables, and time frames;
- develop necessary lines of communication and good working relationships between the lead division staff and personnel of other divisions and organizations participating in a program;
- select project managers;
- monitor the effectiveness of the program quality system;
- provide feedback to supervisory and administrative personnel as necessary regarding the performance of grant and project managers;
- advise supervisory personnel when program timetables, tasks, and coordination procedures are not being met;
- elevate problems and issues requiring resolution to the lead division Deputy Director, or designee(s), for disposition, when appropriate; and
- execute contracts and intergovernmental agreements.

The Executive Director, Directors, Deputy Directors, and the QA Manager have delegated their authority to develop and implement program-related quality systems, including development and maintenance of QAPPs, to Program Managers. These systems shall be developed with the concurrence and assistance of lead QA staff. (See Appendix D.)

Program Managers are responsible for ensuring that environmental activities within their areas of responsibility are performed in accordance with applicable plans and procedures, work performance is measured against specifications, and appropriate management oversight and inspection is accomplished. Program Managers are also responsible for improving systems relating to specific programs as well as ensuring deficient items and services are evaluated and controlled (i.e., inadvertent use or adverse impact on other items and services is prevented), root cause(s) of deficiencies are determined, and corrective actions are planned, implemented, and verified in a timely manner. The Program Manager for Laboratory Accreditation shall determine whether deficiencies or significant conditions warrant suspension or revocation of a laboratory's accreditation.

Program Managers are selected by Directors, Deputy Directors, or Section Managers. Appendix D contains a list of current TCEQ Program Managers.

GRANT MANAGERS/PPG OFFICE COORDINATORS

Grant Managers/PPG Office Coordinators manage federally-funded grants to their conclusion and are accountable for the successful completion of grant-related tasks and objectives. Grant Managers/PPG Office Coordinators or their designees may perform the following tasks:

- maintain a thorough knowledge of work activities, commitments, deliverables, and time frames associated with grants;
- develop necessary lines of communication and good working relationships between the lead division staff and personnel of other divisions and organizations participating in a grant;
- ensure the lead division administrative services coordinator or grant budget coordinator/PPG Office Coordinator and the TCEQ Federal Funds Coordinator are informed of changes, revisions, or additions to projects;
- provide a list of expectations to grant coordinators that identify actions for successful completion of a grant;
- monitor the effectiveness of the grant quality system;
- provide feedback to supervisory and administrative personnel as necessary regarding the performance of grant coordinators;
- advise supervisory personnel when grant timetables, tasks, and coordination procedures are not being met;
- elevate problems and issues requiring resolution to the lead division Deputy Director, or designee(s), for disposition, when appropriate;
- monitor the conduct of their grant and reconcile their grant budget with the operating budget and various grant financial reports;
- prepare, or assist in preparing, contracts and intergovernmental agreements;
- ensure contractors understand their commitment to meet deadlines and schedule commitments;

- enforce corrective action measures to ensure contractors meet deadlines and scheduled commitments and, for federally-funded grants, inform the federal project officer and the TCEQ Federal Funds Coordinator of problems and issues relating to corrective actions when necessary; and
- report any suspected waste, abuse, fraud, or criminal activities with grant funds.

The Executive Director, Directors, Deputy Directors, and the QA Manager have delegated their authority to develop and implement grant-related quality systems. These systems shall be developed with the concurrence and assistance of QA staff.

Grant Managers are responsible for ensuring that environmental activities within their areas of responsibility are performed in accordance with applicable plans and procedures, work performance is measured against specifications, and appropriate management oversight and inspection is accomplished. Grant Managers are also responsible for improving systems relating to specific grants and projects as well as evaluating and controlling deficient items and activities.

Grant Managers are selected by lead division Deputy Directors, or their designees. Due to the structure of the PPG, PPG Office Coordinators may be appointed by each Office to oversee that Office's environmental and programmatic grant activities. Appendix D contains a current list of TCEQ Grant Managers/PPG Office Coordinators and identifies the Federal Funds Coordinator.

PROJECT MANAGERS

Project Managers are authorized to manage environmental projects, including work performed by contractors, to their conclusion and are accountable for the successful completion of project-related tasks and objectives. The project manager role is essentially the same as that described for Grant Coordinator in the Federal Funds Instruction Guide.

Project Managers perform the following tasks:

- maintain a thorough knowledge of work activities, commitments, deliverables, and time frames associated with projects;
- develop necessary lines of communication and good working relationships between the lead division staff and personnel of other divisions and organizations participating in a project;
- ensure the lead division administrative services coordinator or grant budget coordinator, the grant manager, and the TCEQ Federal Funds Coordinator are informed of changes, revisions, or additions to the project;
- negotiate a list of expectations with the grant manager to ensure a clear understanding of the factors that may affect performance;
- monitor the effectiveness of the project quality system;
- review QAPPs to ensure project QA and QC requirements are documented in the QAPPs before submittal to lead QA specialists;
- verify QAPPs are being followed and projects are producing data of known and acceptable quality;
- elevate problems and issues requiring resolution to the lead division Deputy Director, or designee(s), for disposition, when appropriate;

- assist in preparing contracts and intergovernmental agreements;
- ensure project contractors understand their commitment to meet deadlines and schedule commitments; and
- enforce corrective action measures to ensure contractors meet deadlines and scheduled commitments.

Project Managers may also perform the following tasks:

- lead or participate in the development, approval, implementation and maintenance of QA standards;
- coordinate project planning with other agency programs and external participants;
- lead the QAPP development process to ensure that a systematic project planning process is implemented, consistent with Section 7 of this QMP;
- notify QA Specialists and management of circumstances that may adversely affect the quality of data;
- in coordination with the lead QA specialist, develop, enforce, and monitor corrective action; and
- review and approve data, reports, and other deliverables.

The Executive Director, Directors, Deputy Directors, and the QA Manager have delegated authority to develop and implement project-related quality systems, including development and maintenance of QAPPs, to Project Managers. These systems shall be developed with the concurrence and assistance of QA staff.

Project Managers are responsible for ensuring that environmental activities within their areas of responsibility are performed in accordance with applicable plans and procedures, work performance is measured against specifications, and appropriate management oversight and inspection is accomplished. Project Managers are also responsible for improving systems relating to specific projects as well as evaluating and controlling deficient items and activities (i.e., preventing inadvertent use or adverse impact on other items and services), determining root cause(s) of deficiencies, planning and implementing corrective actions, and verifying the effective and timely implementation of corrective actions.

Project Managers are selected by program managers, or their designees.

CONTRACT MANAGERS

Contract Managers are authorized to procure the services of outside entities for performing or supporting environmental work. They are responsible for overseeing most aspects of contractor work. Contract Manager responsibilities may include:

- communicating with and/or instructing contractors on all matters concerning contracts;
- supporting or enabling contractor performance, ensuring that necessary instructions, reviews, approvals, prior authorizations and other support or input specified in the contract is provided in a timely manner;
- when applicable, coordinating and scheduling the review and approval of QAPPs prepared by contractors;
- monitoring and tracking contract-required work;

- monitoring contract expenditures and reviewing/approving invoices or other types of payment requests;
- evaluating and documenting contractor performance;
- assessing risk and guarding against contractor fraud;
- completing close-out activities;
- maintaining all contract-related documents and records; and
- conducting cost- and price-benefit analyses to determine if contractors provide the best value to the state.

ASSESSMENT TEAM LEADERS AND ASSESSORS

With the assistance and concurrence of lead QA staff and project or program managers, lead assessors shall determine the members of assessment teams. Assessment teams may consist of a single (lead) assessor or a lead assessor, other assessors, technical experts, and/or observers. Project managers and lead QA staff (Appendix D), by virtue of their appointment to these positions, have the requisite training and experience which qualify them to conduct assessments. Other personnel determined by project managers, lead QA staff, Deputy Directors, Section Managers, or their designees, may be authorized to conduct assessments.

With the concurrence of lead QA staff, Lead Assessors shall:

- prepare and distribute assessment checklists;
- advise affected lead quality assurance staff, Deputy Directors, and project managers of significant conditions;
- forward written copies of assessment reports to manager(s), the project manager, and the lead QA staff of organizations affected by an assessment; and
- determine whether to accept proposed corrective actions. Lead Assessors shall also:
 - brief team members on their roles and responsibilities;
 - direct assessment preparations;
 - provide written notification to organizations to be assessed (announced assessments);
 - direct entrance and exit meetings;
 - direct the preparation of assessment reports;
 - forward assessment records to lead QA staff;
 - advise lead QA staff and suspend assessments when assessment objectives cannot be achieved; and
 - recommend follow-up assessments.

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**Appendix D:
LEAD OFFICES/DIVISIONS, QUALITY ASSURANCE STAFF,
PROGRAM MANAGERS, and GRANT MANAGERS/PPG OFFICE COORDINATORS**

Lead Offices/Divisions

| <u>Program</u> | <u>Lead Office/Division</u> |
|-------------------------------------|---|
| Agency QA | OCE/Monitoring |
| Air Quality - NEI Reporting Program | OA/Air Quality |
| Air Quality Monitoring | OCE/Monitoring |
| AMM | OCE/Monitoring |
| Brownfields Program | OOW/Remediation |
| CRP | OW/Water Quality Planning |
| CBBEP | OW/Water Quality Planning |
| CWQMN | OW/Water Quality Planning |
| Federal Superfund | OOW/Remediation |
| GBEP | OW/Water Quality Planning |
| Groundwater Assessment | OW/Water Availability |
| Laboratory Accreditation | OCE/Monitoring |
| LTSCC | OW/Water Supply |
| LUST - Corrective Action | OOW/Remediation |
| LUST - Prevention Assistance | OCE/Program Support and Environmental Assistance |
| NPS | OW/Water Quality Planning |
| PA/SI | OOW/Remediation |
| PWSSP | OW/Water Supply |
| RESTORE | OLS/General Law |
| RM | OOW/Radioactive Materials |
| RCRA | OOW/Waste Permits |
| SWQM | OW/Water Quality Planning |
| TMDL | OW/Water Quality Planning |
| UIC | OOW/Radioactive Materials |
| U.S.-Mexico Border Program | EXEC/Intergovernmental Relations |
| WQA | OW/Water Quality |
| WQS | OW/Water Quality Planning |

Lead Quality Assurance Staff

Program

Agency QA
Air Quality - NEI Reporting Program
Air Quality Monitoring
 CATMN/SIM
 PAMS
 Pantex
 PM_{2.5}
 SLAMS
AMM
Brownfields
CRP
CBBEP
CWQMN
Federal Superfund
GBEP
Groundwater Assessment
Laboratory Accreditation
LTSCC
LUST - Corrective Action
LUST - Prevention Assistance
NPS
PA/SI
PWSSP
RM

RCRA
SWQM
TMDL

Lead Quality Assurance Staff

Sharon Coleman
Chris Owen

Jason Natho
Jason Natho
Jason Natho
Jason Natho
Jason Natho
Steven Gibson
Mark Maglitto
Dana Squires
Sharon Coleman
Sharon Coleman, acting
Mark Maglitto
Vanessa Zemke
Michael Chadwick
Sharon Coleman
Jessica Hoch
Mark Maglitto
Heba Kawasmi
Theresa Demboski
Mark Maglitto
Jessica Hoch
Vaishali Tendolkar
Muhammadali Abbaszadeh
(Critical Infrastructure Division)
Anju Chalise
Dana Squires
Theresa Dembowski

| | |
|---|--|
| UIC | Tamara Young Muhammadali Abbaszadeh (Critical Infrastructure Division) |
| U.S.-Mexico Border Program (Air Quality Monitoring) | Jason Natho |
| WQA | Dana Squires |
| WQS | Dana Squires |

Program Managers

| <u>Program</u> | <u>Manager</u> |
|-------------------------------------|---------------------|
| Agency QA | Sharon Coleman |
| Air Quality- NEI Reporting Program | Danielle Nesvacil |
| Air Quality Monitoring | |
| CATMN/SIM | Courtney Groff |
| PAMS | Holly Landuyt |
| Pantex | Guy Wilkins |
| PM _{2.5} Network | Holly Landuyt |
| SLAMS/Border/NCore | Holly Landuyt |
| Local Programs | Holly Landuyt |
| AMM | Steven Gibson |
| Brownfields | Phylcia Allen |
| CRP | Kyle Girten, acting |
| CBBEP | Cory Horan |
| CWQMN | J. Andrew Sullivan |
| Federal Superfund | |
| Core Program Cooperative Agreement | Vacant |
| Block Funding Cooperative Agreement | Vacant |
| GBEP | Lisa Marshall |
| Groundwater Assessment | Abiy Berehe |
| Laboratory Accreditation | Jody Koehler |
| LTSCC | Seth Kramer |
| LUST - Corrective Action | Jennifer Robinson |
| LUST - Prevention Assistance | Marilyn Gates |
| NPS | Faith Hambleton |
| PA/SI | Stephen Ellis |

| | |
|----------------------------|-----------------------|
| PWSSP | Cari-Michel La Caille |
| RM | Gehan Flanders |
| RCRA, Subtitle C | |
| Corrective Action | Jim Formby |
| Enforcement | James Gradney |
| Field Operations | John Shelton |
| Permitting | Gulay Aki |
| Registration & Reporting | Shannon Frazier |
| RESTORE | Diane Mazuca |
| SWQM | J. Andrew Sullivan |
| TMDL | Nicole Hall |
| Uranium Licensing | Gehan Flanders |
| UIC | Carol Dye |
| U.S.-Mexico Border Program | Eddie Moderow |
| WQA | Gregg Easley |
| WQS | Sarah Eagle |

Grant Managers/PPG Office Coordinators (GOCs)

Program/Grant

Grant Manager/GOC

Air Quality - Section 105 Air Pollution Planning
and Control PPG

OA: Elizabeth McKeefter, CAPM
OCE: Kendra Houston

Air Quality Monitoring

 Pantex

Andrea Walker

 PM_{2.5} Network

Maryam Maadan

Brownfields

Randy Arnett

CBBEPP

Shelby Hill

CWA Section 106 Water Pollution Control Grant
Categorical/Supplemental

Shelby Hill

CWA Section 106 Water Pollution Control Grant
Groundwater PPG

OW: Peggy Hunka

CWA Section 106 Water Pollution Control Grant
Surface Water PPG

OW: Randy Baylor

CWA Section 319(h) Nonpoint Source Categorical

Wesley Franks

CWA Section 319(h) Nonpoint Source PPG

OW: Amy Settemeyer

OCE: Kendra Houston

| | |
|---|--|
| CWA Section 604(b) Water Quality Management Plan | Wesley Franks |
| Federal Superfund | |
| Core Program Cooperative Agreement | Randy Arnett |
| Block Funding Cooperative Agreement | Randy Arnett |
| FIFRA Groundwater PPG | OW: Alan Cherepon |
| GBEP | Shelby Hill |
| LTSCC (WIIN Act Section 2107) | Jim Lancaster |
| LUST - Corrective Action | Kristine Elliott |
| LUST - Harvey Disaster Relief | Heba Kawasmi |
| LUST - Prevention Assistance | Heba Kawasmi |
| Multipurpose Grant | Mark Henrichs |
| NEIEN | Soma Chakravarty |
| PA/SI | April Palmie |
| PWSS PPG | OW: Jim Lancaster |
| PWSSP Drinking Water State Revolving Fund (DWSRF) | Jim Lancaster |
| RCRA PPG | Anju Chalise; OOW-Mark Henrichs |
| RESTORE | Sheri Land, Diane Mazuca |
| UIC PPG | Kathryn Ploch; OOW-Mark Henrichs |
| U.S.-Mexico Border Program PPG | EXEC: Eddie Moderow OCE: Kendra Houston |

Note: The TCEQ Federal Funds Coordinator is Brenda Allred, Manager, Federal Funds Section, Budget and Planning Division.

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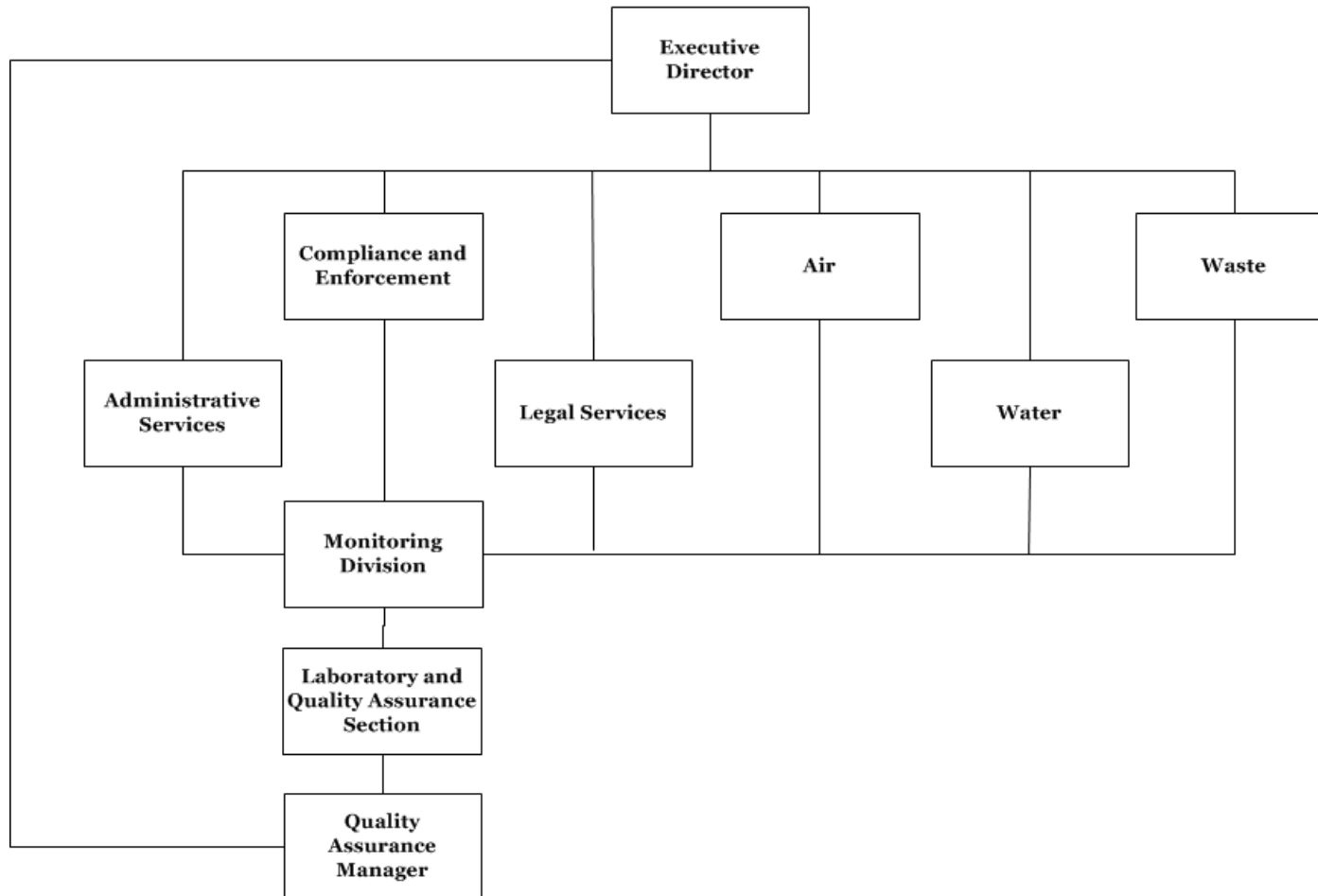
**Appendix E:
ORGANIZATION CHARTS**

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

**Agency Organization
January 2022**

<https://www.tceq.texas.gov/agency/organization>

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY
Quality Assurance Organization



**Appendix F:
PREPARATION, REVIEW, APPROVAL, AND DISTRIBUTION
OF QUALITY MANAGEMENT PLANS**

Quality management plans shall be prepared as necessary to address environmental programs (as defined in EPA Requirements for Quality Management Plans, EPA QA/R-2) listed in Appendix A.

PREPARATION

The agency QMP shall be developed in accordance with QA requirements contained or referenced in this QMP and shall clearly state any interpretations, limitations, or exceptions to those requirements. The TCEQ QA Manager shall coordinate preparation of the agency QMP.

The agency QMP shall be prepared with the involvement and assistance of program and QA staff from all participating organizations. All participating organizations, including EPA, shall be afforded an opportunity to review and comment on the agency QMP prior to its approval and implementation. Unless other arrangements have been agreed upon, reviewers should be given a minimum of 30 days in which to review QMPs. Review comments, responses to comments, and revisions shall be documented and provided to reviewers by the TCEQ QA Manager or designee.

APPROVAL

The agency QMP shall be approved prior to implementation. Approval of the QMP shall be documented by the signatures of the Executive Director, Directors, and the QA Manager as well as the EPA Region 6 QA Manager.

TCEQ CONTRACTORS

Contractor QMPs will conform to EPA QA/R-2 and other applicable requirements documents consistent with contractual obligations.

DISTRIBUTION OF QMPs

The TCEQ QA Manager shall distribute copies of the approved agency QMP to the Executive Director, Directors, participating divisions, and lead QA staff as well as EPA Region 6. Lead QA staff (Appendix D) shall distribute copies of the agency QMP to TCEQ personnel and contractors whose work requires knowledge of and adherence to requirements and specifications contained in the document.

MAINTENANCE OF QMPs

The TCEQ QA Manager shall ensure the agency QMP is current.

QMP REVISIONS

The agency QMP shall be reissued annually or revised and reissued within 120 days of significant changes. If the QMP accurately reflects agency goals and policies, the annual

reissuance may be done by a certification that the plan is current, to include a copy of new, signed approval pages.

EXPEDITED CHANGES

Expedited changes to QMPs may be approved to reflect changes in organization, mission, and key personnel, address deficiencies, improve operational efficiency, or accommodate unique and unusual circumstances. Expedited changes to QMPs are effective upon approval by the TCEQ QA Manager and the EPA Region 6 QA Manager.

**Appendix G:
PREPARATION, REVIEW, APPROVAL, AND DISTRIBUTION
OF QUALITY ASSURANCE PROJECT PLANS**

Quality Assurance Project Plans (QAPPs) shall be prepared for projects involving environmental data operations (as defined in *EPA Requirements for Quality Assurance Project Plans, EPA QA/R-5*) governed by this QMP. Environmental data operations include, but are not limited to:

- sampling and analysis;
- compilation or use of data collected from existing sources (acquired or secondary data);
- development and/or use of models of environmental processes; and
- collection or calculation of geospatial data.

QAPPs document how environmental data operations are organized, planned, implemented, and assessed. They also define in detail how specific QA and quality control activities will be applied. None of the environmental work governed by this QMP may be initiated until an approved QAPP or equivalent planning document is distributed to project personnel.

QAPP PREPARATION AND REVIEW

QAPPs shall be prepared in accordance with requirements contained in EPA QA/R-5. Unless otherwise directed by the lead Directors or Deputy Directors, project managers shall, with the assistance of the QA staff, coordinate the preparation of QAPPs.

QAPPs shall be prepared with the involvement and assistance of program and QA staff from all participating organizations, using a systematic planning process, such as the DQO process (*Guidance for the Data Quality Objectives Process, EPA QA/G-4*) or comparable alternative. All participating organizations, including EPA, shall be afforded an opportunity to review and comment on proposed QAPPs prior to their approval and implementation. Unless other arrangements have been agreed upon, reviewers should be given a minimum of 30 days in which to review QAPPs, including annual and multi-year QAPP updates. Review comments, responses to comments, and revisions shall be documented and provided to reviewers by project managers or their designees.

PRE-QAPP WORK APPROVAL

EPA QA/R-5 states:

“All work funded by EPA that involves the acquisition of environmental data generated from direct measurement activities, collected from other sources, or compiled from computerized databases and information systems shall be implemented in accordance with an approved QA Project Plan... No work covered by this requirement shall be implemented without an approved QA Project Plan available prior to the start of the work except under circumstances requiring immediate action to protect human health and the environment or operations conducted under police powers.”

Questions regarding the application of QA requirements to projects or portions of projects may be discussed with TCEQ QA staff and should be discussed in advance with EPA Region 6 Project Officers.

APPROVAL

At a minimum, QAPP approvals shall be documented by the signatures specified in Table 1. Directors, Deputy Directors, Section and Grant Managers/PPG Office Coordinators, and the QA Manager may delegate QAPP approval authority. The lead division Deputy Director, Section Managers, Grant Managers/PPG Office Coordinators, Program and Project Managers, participating QA Specialists, or QA Manager may require additional approval signatures. Both electronic, i.e., scanned and e-mailed/faxed signature pages, and/or original signatures may be accepted, depending upon program-specific requirements.

Unless other arrangements have been approved, new QAPPs, including annual and multi-year QAPP updates, shall be prepared and approved according to the following timetable.

| Activity Office/Organization | Timetable | Lead |
|---|---|----------------|
| Submittal for TCEQ QA review | 135 days before project initiation/ QAPP expiration date | See Appendix D |
| TCEQ Approval/Submittal to EPA | 75-90 days before project initiation/ QAPP expiration date | See Appendix D |
| Comments/Approval from EPA | 15 days before project initiation/ QAPP expiration date | See Appendix D |

Some program QAPPs (e.g., RCRA/UIC) must be approved by EPA prior to the end of each fiscal year. Clean Rivers and certain other programs are state-funded; therefore, their QAPPs do not require EPA approval and may have different submittal and approval schedules from those cited above.

Multi-year QAPPs must be reviewed annually by TCEQ project managers, or by lead QA specialists for programs whose project managers are not responsible for QAPP preparation or approval. For EPA-funded programs and projects, the annual reviews must be documented in memorandum form and their accuracy certified; the certification must include any program or project changes which were approved via amendment during the prior year. Since the certification is confirming the continued accuracy of the QAPP, any necessary amendments should be approved by the EPA (or TCEQ QA Manager for delegated programs) prior to completion of the annual certification. Additionally, any minor administrative revision not impacting data or operations (e.g., organizational changes, schedule changes not affecting the project design or quality or quantity of work to be performed, etc.) shall also be conveyed as part of the annual certification. TCEQ project managers or designees must provide certification of the annual reviews to the TCEQ QA Manager and the appropriate EPA Region 6 Project Officer 30 days before the annual anniversary date of the QAPP.

EPA Region 6 may delegate authority for QAPP approval to the TCEQ for certain programs. The TCEQ intends to seek from EPA authority to approve QAPPs on behalf of Region 6. In doing so, the TCEQ will ensure that EPA's role in the development of QAPPs is maintained and that a program's or organization's quality system is capable of achieving data of appropriate and sufficient quality. Written delegation requests are submitted to EPA jointly by the TCEQ QA Manager and the lead division Deputy Director (or designee).

Lead QA specialists, TCEQ project managers, or their designees shall submit QAPPs to their respective EPA Region 6 Project Officers. In the event an EPA Project Officer does not provide written approval of or comments describing deficiencies in a QAPP within 45 days, the lead QA specialist, project manager, or designee shall contact the EPA Region 6 QA Manager and request assistance in determining the status of the QAPP.

TCEQ CONTRACTORS

Environmental work conducted jointly by TCEQ and contractors or conducted solely by TCEQ contractors shall be planned and documented in QAPPs. QAPPs involving contractors shall be prepared, reviewed, and approved as described above. (Unless TCEQ has delegated authority and oversight of subcontractors, these requirements also apply to environmental work conducted by subcontractors.)

Contractors shall be bound by requirements delineated in QAPPs to the extent these requirements pertain to the goals and objectives of their work. Contractor commitment to requirements contained in QAPPs shall be documented. This documentation may take the form of QAPP approval or concurrence signatures, or QAPP distribution receipt signatures.

DISTRIBUTION

Project managers, or designees, shall distribute copies of QAPPs to the individuals listed in the Distribution Lists of the documents. At a minimum, distribution shall include participating organizations (offices, divisions, regional offices) within TCEQ, participating contractors, and EPA as applicable. TCEQ Deputy Directors, Regional Directors, and contractor representatives shall ensure copies of QAPPs are made available to personnel performing environmental activities governed by these documents.

MAINTENANCE

Lead QA specialists (Appendix D) shall maintain an up-to-date list of all QAPPs applicable to their respective programs as well as approved copies of these documents. Unless a longer retention period is specified in a grant, record retention schedule, or other governing document, lead QA staff, or designees, shall retain QAPPs for three years after the end of the project period.

Table 1
QAPP Approval Requirements

| | Exec Dir | Dir | Grant Mgr/GOC | Dep Dirs | Sec Mgrs | Pgm Mgr | Pjt Mgr | QA Specs | QA Mgr | EPA |
|--|----------|-----|---------------|----------|----------|---------|---------|----------|--------|-----|
| Air Quality FCAA Section 105 | . | . | . | . | . | . | . | . | . | . |
| Air Quality Monitoring+ CRP* | . | . | . | . | . | . | . | . | . | □ |
| CBBEP | . | . | . | . | o | . | . | . | . | . |
| CWA Section 106* | | | | | | | | | | |
| PPG- Groundwater | . | . | . | . | . | . | . | . | . | . |
| PPG- Surface Water*, *** (includes CWQMN, SWQM, WQA, and WQS) | . | . | o | . | . | . | . | . | . | . |
| Categorical (Supplemental) Grant* | . | . | o | . | . | . | . | . | . | . |
| Federal Superfund and Brownfields | . | . | . | . | . | . | . | . | . | . |
| Site-specific sampling plans | . | . | . | . | . | . | . | . | # | . |
| FIFRA PPG-Groundwater | . | . | . | . | o | . | . | . | . | . |
| GBEP* | . | . | . | . | o | . | . | . | . | □ |
| LTSCC (WIIN Act Section 2107) | . | . | . | . | . | . | . | . | . | . |
| LUST Corrective Action | . | . | . | . | . | . | . | . | . | . |
| LUST Prevention Assistance | . | . | . | . | . | . | . | . | . | . |
| NPS (CWA 319 & 604(b))* | . | . | o | . | o | . | . | . | . | □ |
| PA/SI | . | . | . | . | . | . | . | . | . | . |
| Site-specific sampling plans | . | . | . | . | . | . | . | . | # | . |
| PWSSP | . | . | . | . | . | . | . | . | . | . |
| RCRA*** | . | . | . | . | . | . | . | . | . | . |
| TMDL* | . | . | o | . | o | . | . | . | . | □** |
| UIC*** | . | . | . | . | . | . | . | . | . | . |
| U.S.- Mexico Border | . | . | . | . | . | . | . | . | . | . |

- - approval signature(s) required. The Deputy QA Manager may sign in lieu of the QA Manager.
- + - excluding QAPPs from contract laboratories. Approval requirements are determined by program management in consultation with QA staff.
- - excluding QAPPs for state-funded air quality monitoring programs, the GBEP, and the NPS and TMDL programs
- o - excluding Monitoring, Water Quality, and Water Quality Planning Divisions for certain QAPPs
- # - TCEQ QA Manager signature required if QAPP amended by field sampling plan
- * - Water Quality Planning Division Data Manager (or designee) signature required if data will be submitted to SWQMIS
- ** - EPA signatures required for certain modeling projects
- *** - Area Directors' signatures may be required. Personnel should consult OCE Program Support for projects involving Region staff participation.

APPROVAL PERIODS AND EXTENSIONS

The last approved version of a QAPP shall remain in effect only for the approval period defined by the approving authority(ies). Upon expiration of the approval period for a QAPP, all work covered by the expired QAPP, whether performed by TCEQ or contractors, shall cease until such time as a revised QAPP has been fully approved by the approving authority(ies).

TCEQ program personnel may request extensions of federally-funded QAPPs, but extensions may only be granted by EPA Region 6 Project Officers, on a case-by-case basis. Copies of the requests must be sent concurrently to the TCEQ Grant Manager and QA Manager. Copies of EPA Region 6 responses to the extension requests must also be provided to the TCEQ Grant Manager and QA Manager. For state-funded QAPPs under TCEQ QA purview, program personnel should submit extension requests to the TCEQ QA Manager for approval.

REVISIONS

Until environmental work is completed, QAPPs shall be revised as necessary and reissued by their expiration dates or revised and reissued within 120 days of significant changes, whichever is sooner. If the entire QAPP is current, valid, and accurately reflects the project goals and the organization's policy, the reissuance may be done by a certification that the plan is current, to include a copy of new, signed approval pages for the QAPP. (See also "Approval Periods and Extensions.")

AMENDMENTS

Amendments to QAPPs are developed and approved to reflect changes in project organization, tasks, schedules, objectives, and methods, address deficiencies, improve operational efficiency, and accommodate unique or unanticipated circumstances. When changes are needed and EPA has not delegated authority to TCEQ for QAPP approval, the TCEQ project manager will, in conjunction with the lead QA specialist, present the changes to the EPA Region 6 Project Officer. The EPA Project Officer will determine if the changes warrant a substantive or nonsubstantive amendment. If the amendment is determined to be substantive, the TCEQ project manager will submit a formal amendment for approval. If the EPA Project Officer deems the changes to be non-substantive, the TCEQ project manager will notify all individuals and organizations contained in the QAPP distribution list of the changes being made. These changes will remain in effect until the next revision of the QAPP, and new EPA Q-TRAK numbers for the amendments will not be needed.

If EPA has delegated authority to TCEQ for QAPP approval, the TCEQ project manager will contact the lead QA specialist or TCEQ QA Manager to determine whether changes are substantive or nonsubstantive, and to discuss the appropriate format for amendment documentation. If the changes are deemed substantive, the TCEQ project manager will submit an amendment to the lead QA specialist or TCEQ QA Manager for review and approval.

Amendments are effective immediately upon approval by the TCEQ project manager or designees, the lead QA specialist, the TCEQ QA Manager or designee, and the EPA Region 6 Project Officer (when required). Amendments to QAPPs and the reasons for the changes

shall be documented by the TCEQ project manager and distributed immediately to all individuals and organizations contained in the QAPP distribution list.

Amendments shall be incorporated into a revised QAPP during the anniversary revision process or within 120 days of the initial approval in cases of significant changes. For multi-year QAPPs, amendments must be attached to and noted in annual certification submissions.

Appendix H:
GLOSSARY OF TERMS AND PHRASES

Accreditation - The process by which the commission evaluates and recognizes a laboratory as meeting standards for accreditation and commission rules.

Accuracy - The degree of agreement between a measured value and a true or known value, often expressed as percent recovery of a spiked sample. Accuracy includes a combination of random error (precision) and systematic error (bias) components that result from sampling and analytical components.

Activity - An all-inclusive term describing a specific set of operations or related tasks to be performed, either serially or in parallel (e.g., research and development, field sampling, analytical operations, equipment fabrication), that in total result in a product or service.

Acquired Data (also existing or secondary data) - Environmental data used for a project but originally produced for other purposes and/or from other sources, including literature, compilations from databases and information systems, results from computerized or mathematical models of environmental processes and conditions, and industry surveys.

Amendment - A change to a quality assurance document that normally does not require reissuance of the original document.

Assessment - The evaluation process used to measure the performance or effectiveness of a system and its elements, including audit, performance evaluation, quality system audit, peer review, inspection, or surveillance.

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

Audit of Data Quality - An examination of data to determine if the data objectives specified in the QAPP were met for the project. Audits of data quality entail tracing data through the steps of the collection, analysis, interpretation, and reporting processes to identify a clear, logical connection between the steps in the data management system for the project.

Auditee - The organization being audited.

Auditor - A person qualified to perform audits.

Bias - The systematic or persistent distortion of a measurement process which causes errors in one direction (i.e., the expected sample measurement is different from the sample's true value.).

Business Plans - Annual office- and division-specific descriptions of organizational missions, philosophy, objectives, strategies, programs, partnerships, self-assessments, and key initiatives.

By-product Material - A radioactive material, other than special nuclear material, that is produced in or made radioactive by exposure to radiation incident to the process of producing or using special nuclear material; and tailings or wastes produced by or resulting from the extraction or concentration of uranium or thorium from ore processed primarily for its source material content, including discrete surface wastes resulting from uranium solution extraction processes.

Calibration - Comparison of a measurement standard, instrument, or item with a standard or instrument of higher accuracy to detect and quantify inaccuracies and to report or eliminate those inaccuracies by adjustments.

Career Ladder - A structured progression within a classification series providing an employee with increasing levels of responsibility and pay.

Chain of Custody - An unbroken trail of accountability that ensures the physical security of samples, data, and records.

Characteristic - Any property or attribute of a datum, item, process, or service that is distinct, describable, and/or measurable.

Comments - Statements made by auditors in an audit report to assist an auditee. Comments do not require corrective action or response from the auditee.

Conformance - An affirmative indication or judgment that a product or service has met the requirements of the relevant specifications, contract, or regulation; also, the state of meeting the requirements.

Contractor - Any organization or individual that contracts to furnish services or items or to perform work; a supplier in a contractual relationship. For the purposes of the TCEQ quality assurance program, the term also includes individuals and organizations that participate in environmental programs or projects but may not receive monetary compensation for goods and services they provide or work they perform.

Controlled Document - A document which is identifiable and for which revisions and removal from use can be tracked. The process of document control manages the revisions of documents, ensuring that only the latest version is available to its users. At a minimum, the document control process must perform the following functions: edit, review, approval, revision, and distribution.

Corrective Action - An action taken to eliminate the causes and effects of an existing deficiency or other undesirable situation.

Customer - Any individual or organization for whom items or services are furnished or work is performed in response to requirements and expectations.

Data Quality Assessment - A process for performing statistical analysis to determine whether the quality of a data set is adequate for its intended use.

Data Quality Objectives (DQOs) - Qualitative and quantitative statements derived from the DQO process that clarify study, technical, and quality 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 Quality Objectives Process - A systematic strategic planning tool based on the scientific method that identifies and defines the type, quality, and quantity of data needed to satisfy a specified use.

Deficiency - An unauthorized deviation from acceptable procedures or practices, or a defect in an item.

Design - Specifications, drawings, design criteria, and performance requirements as well as the result of deliberate planning, analysis, mathematical manipulations, and design processes.

Design Change - Any revision or alteration of the technical requirements defined by approved and issued design output documents and approved and issued changes thereto.

Design Review - A documented evaluation by a team, including personnel such as the responsible designers, the customer for the work or product being designed, and a quality assurance representative, but other than the original designers, to determine if a proposed design will meet the established design criteria and perform as expected when implemented.

Document - Written or pictorial information describing, defining, specifying, reporting, or certifying activities, requirements, procedures, or results.

Environmental Conditions - The description of a physical medium (e.g., air, water, soil, sediment) or biological system expressed in terms of its physical, chemical, radiological, or biological characteristics.

Environmental Data - Measurements or information that describe environmental processes or conditions or the performance of environmental technology.

Environmental Data Operations - Work performed to obtain, use, or report information pertaining to environmental processes and conditions.

Environmental Monitoring - The process of measuring or collecting environmental data.

Environmental Processes - Manufactured or natural processes that produce discharges to or that affect the ambient environment.

Environmental Programs - Any work or activities involving the environment, including characterization of environmental processes or conditions; environmental monitoring; environmental research and development; operation of environmental technologies; and laboratory operations on environmental samples. Environmental programs normally comprise one or more projects and may involve one or more grants.

Environmental Technology - Pollution control devices and systems, waste treatment processes and storage facilities, and site remediation technologies and their components that may be added to process discharges (e.g., emissions, effluents) or used in the ambient environment to remove pollutants or contaminants from or prevent them from entering the environment.

Expedited Change - A change in or amendment to a quality assurance document (e.g., QMP, QAPP) that is authorized through an abbreviated review and approval process.

Federal Funds Coordinator - A functional title that refers to the Federal Funds Section Manager who oversees assigned grant program funding.

Financial Assistance - The process by which funds are provided by one organization (usually government) to another organization for the purpose of performing work or furnishing services or items. Financial assistance mechanisms include grants, cooperative agreements, and government interagency agreements.

Finding - An assessment conclusion (positive or negative) that identifies a condition having a significant effect on an item or activity and is normally accompanied by specific examples of the observed condition.

Functional Job Description - Position-specific descriptions of job functions, duties, and abilities. The Functional Job Description (FJD) includes a brief job description statement; a list of the essential job functions and the percentage of time devoted to each function; physical and environmental demands and hazards; and cognitive, communication, and other job-related demands.

Graded Approach - The process of basing the level of application of managerial controls applied to an item or work according to the intended use of the results and the degree of confidence needed in the quality of the results.

Grant - An agreement between TCEQ and another entity concerning the production of environmental items; grant, cooperative agreement, contract.

Grant Manager - A functional title that refers to the individual authorized to manage a federally-funded grant to its conclusion and accountable for the successful completion of

grant-related tasks and objectives. The grant manager is the primary communicator with the agency federal funds coordinator.

Hazardous Waste - A solid waste identified or listed as a hazardous waste by the Administrator of the U.S. Environmental Protection Agency under the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act of 1976, as amended.

Independent Assessment - An assessment performed by a qualified individual, group, or organization that is not a part of the organization directly performing and accountable for the work being assessed.

Inspection - An activity such as measuring, examining, testing, or gauging one or more characteristics of an entity and comparing the results with specified requirements in order to establish whether conformance is achieved for each characteristic.

Item - An all-inclusive term used in place of the following: appurtenance, facility, sample, assembly, component, equipment, material, module, part, product, structure, subassembly, subsystem, unit, documented concepts, or data.

Lead Quality Assurance Specialist - A functional title that refers to an individual authorized to coordinate development and implementation of the QA program for a TCEQ organization or program.

Management - Those individuals directly responsible and accountable for planning, implementing, and assessing work.

Management System - A structured, non-technical system describing the policies, objectives, principles, organizational authority, responsibilities, accountability, and implementation plan of an organization for conducting work and producing items and services.

Management System Review (MSR) - A review to evaluate and document the management policies and procedures used to plan, implement, assess and correct the technical activities for environmental programs, as well as note good practices and suggested changes for improving the quality systems that support data for defensible environmental decisions. The MSR may be based upon document review, file examination, and interviews of managers and staff responsible for environmental data and operations.

Measurement and Testing Equipment - Tools, gauges, instruments, sampling devices, or systems used to calibrate, measure, test, or inspect in order to control or acquire data to verify conformance to specified requirements.

Method - A body of procedures or techniques for performing an activity (e.g., sampling, chemical analysis, quantification) systematically presented in the order in which they are to be executed.

Mixed Waste - A combination of hazardous waste and low-level radioactive waste.

Nonconformance - A deficiency in characteristic, documentation, or procedure that renders the quality of an item or activity unacceptable or indeterminate; non-fulfillment of a specified requirement.

Objective Evidence - Any documented statement of fact, other information, or record, either quantitative or qualitative, pertaining to the quality of an item or activity, based on observations, measurements, or tests which can be verified.

Observation - A statement of fact that is supported by objective evidence and made during an audit.

Organization - A company, corporation, firm, enterprise, or institution, or part thereof that has its own functions and administration.

Organizational Structure - The responsibilities, authorities, and relationships, arranged in a pattern, through which an organization performs its functions.

Peer Review - A documented, critical review of work generally beyond the state of the art or characterized by the existence of potential uncertainty. The peer review is conducted by qualified individuals (or organizations) who are independent of those who performed the work but are equivalent in technical expertise (i.e., peers) to those who performed the original work. The peer review is conducted to ensure that activities are technically adequate, competently performed, properly documented, and satisfy established technical and quality requirements. The peer review is an in-depth assessment of the assumptions, methodology, acceptance criteria, and conclusions pertaining to specific work and of the documentation that supports them. Peer reviews provide an evaluation of a subject where quantitative methods of analysis or measures of success are unavailable or undefined, such as in research and development.

Performance Evaluation - A type of audit in which quantitative data generated in a measurement system are obtained independently and compared with routinely obtained data to evaluate the proficiency of an analyst or laboratory.

Performance Partnership Grant (PPG) Coordinator - A functional title that refers to TCEQ Budget and Planning Division personnel responsible for coordinating PPG efforts with PPG Office Coordinators, the Federal Funds Coordinator, and/or EPA.

Performance Partnership Grant (PPG) Office Coordinator - A functional title that refers to the individual(s) authorized to manage a specific PPG program and/or an Office's portion of the PPG at an office level to its conclusion and who is accountable for the successful completion of the grant-related tasks and objectives. The PPG Office Coordinator is the primary communicator with the PPG Coordinator or Federal Funds Coordinator regarding the assigned PPG program.

Precision - A measure of mutual agreement among individual measurements of the same property, usually under prescribed similar conditions, expressed generally in terms of the standard deviation.

Procedure - A specified way to perform an activity.

Process - A set of interrelated resources and activities which transforms inputs into outputs.

Program - See environmental programs.

Program Manager - A functional title that refers to the individual authorized to manage an ongoing environmental program and accountable for the successful completion of program-related tasks and objectives. Program managers may be Deputy Directors, Section Managers, or Team Leaders.

Project - An organized set of activities within a program.

Project Manager - A functional title that refers to the individual authorized to manage an environmental project, including work performed by contractors, to its conclusion and who is accountable for the successful completion of project-related tasks and objectives.

Quality - The totality of 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) - An integrated system of management 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 customer.

Quality Assurance Project Plan (QAPP) - A formal document describing in comprehensive detail the necessary quality assurance, quality control, and other technical activities that must be implemented to ensure that the results of the work performed will satisfy the stated performance criteria.

Quality Assurance Record - A document that furnishes objective evidence of the quality of items or activities and that has been verified and authenticated as technically complete and correct.

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 established by the customer; operational techniques and activities that are used to fulfill requirements for quality.

Quality Improvement - A management program for improving the quality of operations.

Quality Management Plan (QMP) - A formal document or manual, usually prepared once for an organization, that describes the quality system in terms of organizational structure, functional responsibilities of management and staff, lines of authority, and required interfaces for those planning, implementing, documenting, and assessing all activities conducted.

Quality System - A structured and documented management system (1) describing the policies, objectives, principles, organizational authority, responsibilities, accountability, and implementation plan of an organization for ensuring quality in its work processes, products (items), and services and (2) providing the framework for planning, implementing, documenting, and assessing work performed by the organization and for carrying out required quality assurance and quality control.

Quality System Audit (QSA) - A systematic and independent examination and evaluation to determine whether an organization's quality system complies with planned arrangements and whether these arrangements are implemented effectively and are suitable for achieving objectives.

Radioactive Material - A naturally occurring or artificially produced solid, liquid, or gas that emits radioactivity spontaneously.

Radioactive Substance - (1) By-product material, (2) naturally occurring radioactive material (NORM) waste, excluding oil and gas NORM waste; (3) radioactive material; (4) low-level radioactive waste; (5) source material; (6) source of radiation; and (7) special nuclear material.

Readiness Review - A systematic, documented assessment of the readiness for the startup or continued use of a facility, process or activity. A readiness review is usually conducted before proceeding beyond a project milestone and prior to initiating a major phase of work.

Remediation - The process of reducing the concentration of a contaminant (or contaminants) in air, water, or soil media to a level that poses an acceptable risk to human health.

Representativeness - A measure of the degree to which data accurately and precisely represent a characteristic of a population, parameter variations at a sampling point, a process condition, or an environmental condition.

Reproducibility - The precision, usually expressed as a standard deviation, that measures the variability among the results of measurements of the same sample at different laboratories.

Revision - A reissued quality assurance document (e.g., QMP, QAPP, etc.). A reissued document is usually identified by a revision, or version, number (e.g., TCEQ Quality Management Plan, Rev. 04) to distinguish it from a superseded and out-of-date document.

Root Cause - The underlying cause of an adverse condition which, when corrected, will prevent further recurrence of the condition. The term “root cause” can also be used to describe the underlying cause of a positive condition.

Self-Assessment - Assessments of work conducted by individuals, groups, or organizations directly responsible for overseeing and/or performing the work.

Service - The result generated by activities at the interface between the supplier and the customer, and by the supplier’s internal activities to meet customer needs.

Significant Condition - Any state, status, incident, or situation of an environmental process or condition, or environmental technology, in which the work being performed will be adversely affected sufficiently to require corrective action to satisfy quality objectives or specifications and safety requirements; a condition that, if uncorrected, could have a serious effect on safety, integrity, validity, or availability of environmental data, operations, or systems.

Software Life Cycle - The period of time that starts when a software product is conceived and ends when the software product is no longer available for routine use. The software life cycle typically includes a requirements phase, a design phase, an implementation phase, a test phase, an installation and check-out phase, an operation and maintenance phase, and sometimes a retirement phase.

Specification - A document stating requirements and which refers to or includes drawings or other relevant documents. Specifications should indicate the means and the criteria for determining conformance.

Standard Operating Procedure (SOP) - A written document that details the method for an operation, analysis, or action with thoroughly prescribed techniques and steps and that is officially approved for performing certain routine or repetitive tasks.

Supplier - Any individual or organization furnishing services or performing work according to an agreement between two parties, such as a contract or financial assistance agreement (i.e., vendor, seller, contractor, subcontractor, fabricator, or consultant).

Surveillance - Continual or frequent monitoring and verification of the status of an entity and the analysis of records to ensure that specific requirements are being fulfilled.

Technical Review - A process by which a documented critical review of work is or has been performed within the state of the art. The review is accomplished by one or more qualified reviewers who are independent of those who performed the work but are collectively equivalent in technical expertise to those who performed the original work. The review is an in-depth analysis and evaluation of documents, activities, material, data, or items that require technical certification or validation for applicability, correctness, adequacy, completeness, and assurance that established requirements are satisfied.

Technical Systems Audit (TSA) - A thorough, systematic, on-site qualitative audit of facilities, equipment, personnel, training procedures, record keeping, data validation, data management, and reporting aspects of a system.

TCEQ Strategic Plan - A long-range planning and assessment tool. All Texas agencies must revise their strategic plans every two years.

Traceability - The ability to trace the history, application, or location of an entity by means of recorded information. For calibrations, traceability relates measuring equipment to national or international standards, primary standards, basic physical constants or properties, or reference materials. For data collection, traceability relates calculations and data generated throughout the project back to the quality requirements for the project.

User - An organization, group, or individual that uses the results or products from environmental programs. A user may be a customer for whom the results or products were collected or created.

Validation - Confirmation by examination and provision of objective evidence that the requirements for a specific intended use are fulfilled. For design and development, validation concerns the process of examining a product or result to determine conformance to user needs.

Verification - Confirmation by examination and provision of objective evidence that specified requirements have been fulfilled. For design and development, verification concerns the process of examining a result of a given activity to determine conformance to the stated requirements for that activity.

Work - The process of performing a defined task or activity (e.g., research and development, field sampling, analytical operations, equipment fabrication).