

Comprehensive Compliance Investigations

Addendum 5

(Revision 2)

to the

Quality Assurance Project Plan for the Texas Commission on Environmental Quality Public Water System Supervision Program Relating to the Safe Drinking Water Act

Effective

November 10, 2022



List of Acronyms

CFR	Code of Federal Regulations
CCI	comprehensive compliance investigation
CCEDS	Consolidated Compliance and Enforcement Data System
CA	corrective action
COC	chain of custody
DOC	Demonstration of Capability
DSHS	Department of State Health Services
DWQT	Drinking Water Quality Team
DWSG	Drinking Water Sampling Guide
FB	field blank
IDAC	individual demonstration of analytical capability
ID	identification
LFB	laboratory fortified blank
LFM	laboratory fortified matrix
LIMS	Laboratory Information Management System
LQAS	Laboratory Quality Assurance Section
LRB	laboratory reagent blank
MD	Monitoring Division
NOE	notice of enforcement
NOV	notice of violation
NPDWR	National Primary Drinking Water Regulations
NSDWR	National Secondary Drinking Water Regulations
OSHA	Occupational Safety and Health Administration
OCE	Office of Compliance and Enforcement
OLS	Operator Licensing Section
OW	Office of Water
PDP	personal development plan
PTRS	Plan and Technical Review Section
PWS	Public Water System
PWSS	Public Water System Supervision
QA	quality assurance
QAPP	Quality Assurance Project Plan
QC	quality control
QMP	Quality Management Plan
RG	regulatory guidance
SDWA	Safe Drinking Water Act
SDWIS	Safe Drinking Water Information System
SOP	standard operating procedure
SWP	source water protection
TAC	Texas Administrative Code
TCEQ	Texas Commission on Environmental Quality
WSD	Water Supply Division
PSS	Program Support Section
SDWA	Safe Drinking Water Act
WSD	Water Supply Division

(A) Project Management

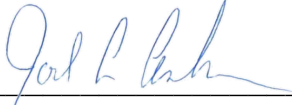
A1 Approval Pages

The following individuals are signatories on this QAPP Addendum because they are responsible for the management and assurance of quality of the work described.

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A3 Distribution List

The PWSS Program Lead Quality Assurance Specialist ensures the QAPP main document, this QAPP Addendum, and any subsequent revisions are distributed to the project participants listed in Table A3.

The OCE Public Drinking Water Liaison ensures all other project participants, including Water Section Managers and PWS Field Investigators in all Regions, receive this QAPP Addendum.

Table A3 QAPP Addendum Distribution List

QAPP Recipients	Title	Contact Information
Andy Gardner	Program Support and Environmental Assistance Division Deputy Director	Andy.Gardner@tceq.texas.gov
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The current version of the Programmatic QAPP and all addenda are on the TCEQ webpage at <tceq.texas.gov/drinkingwater/pwss.html>.

A4 Project Organization

Section A4 of the QAPP main document describes roles and responsibilities of TCEQ individuals in WSD management positions, including the PWSS Program Lead Quality Assurance Specialist, Deputy Directors, etc.

The individual/groups listed below manage, administer, and participate directly in the stated activities related to CCIs.

A4.1 Field Support Team, Work Leader, OCE PSS

Ensures consistency of OCE Region Water Programs activities with EPA requirements for inventory data generation and CCIs in the Border and Permian Basin, Central Texas, Coastal and East Texas, and North Central and West Texas Areas.

A4.2 OCE Public Drinking Water Liaison

Serves as the Liaison between the TCEQ/OCE/PSS and OW/WSD staff by providing the WSD with OCE procedural updates; providing the OCE with sample collection and PWS data requirement updates from the WSD; participating in rule changes related to the SDWA; conveying SDWA rule changes to regional staff; negotiating appropriate procedural and policy changes as programmatic needs require; and coordinating corrective action between the PWSS Program Lead Quality Assurance Specialist and OCE.

A4.3 OCE PSS Training Coordinator

Responsible for coordinating OCE Region PWS training along with the PWS Committee to ensure consistency across the regions.

A4.5 Water Section Managers, Sixteen Regional Field Offices

Responsible for monitoring the work associated with conducting CCIs at PWSs. This includes the schedule, activities, field investigator reports, and corrective actions.

A4.6 Field Investigators

The TCEQ OCE field investigators perform CCIs and actions including, but not limited, to entering inspection data/information into the Consolidated Compliance and Enforcement Data System (CCEDS), preparing investigation reports, compliance determinations, corresponding with the PWSs, and referring PWSs for enforcement, as necessary.

A5 Background/Definition

The State of Texas has primacy for implementing the SDWA of 1974 and its associated federal regulations. As part of this, the TCEQ conducts sanitary surveys (see note below) pursuant to the SDWA. A sanitary survey is defined in 30 TAC §290 Subchapter D as an onsite review of a public water system's adequacy for producing and distributing safe drinking water by evaluating the following elements.

- water source
- treatment
- distribution system
- finished water storage

- pump, pump facilities, and controls; monitoring, reporting, and data verification
- system management, operation, and maintenance
- operator compliance

Note: In Texas, TCEQ uses the term PWS Comprehensive Compliance Investigation (CCI) in place of PWS Sanitary Survey. For federal reporting the term “sanitary survey” is used.

PWS CCIs are conducted to determine a facility’s capacity to deliver drinking water on a sustainable basis. They are also conducted to identify and correct water facilities’ physical and operational weaknesses. CCIs are a proactive public health measure that can identify deficiencies in PWSs before contamination of public drinking water occurs. CCIs are carried out to achieve the follow goals.

- Identify systems needing technical or capacity development assistance.
- Reduce the risk of waterborne disease by identifying significant deficiencies.
- Provide an opportunity to educate system operators.
- The EPA requires that the primacy agency (TCEQ) perform sanitary surveys (CCIs) of PWSs. CCIs must be performed every three years on community water systems and every five years on non-community water systems.

Activities conducted as part of CCIs are environmental data operations as defined in the TCEQ Quality Management Plan (QMP) and EPA Requirements for QAPPs, EPA QA/R-5. As such, the QA processes regarding organization, planning, implementation, and assessment are documented in this QAPP Addendum which is reviewed and approved by the EPA. This document is written as an addendum to the PWSS Programmatic QAPP to facilitate its management, review, and future revision.

A6 Project/Task Description

Prior to the start of each fiscal year, the TCEQ OCE PSS generates each Region’s list of active PWSs. The list identifies the PWSs that need to be investigated in the next fiscal year and PWSs that have never had an investigation performed because of their activity dates. The OCE Regional Office Water Section Manager develops the Region’s work plan for PWSs that are scheduled to be investigated that fiscal year. Community PWSs are generally inspected every three years and non-community PWSs are inspected every five years. PWSs are inspected sooner if there are complaints or other deficiencies.

A work-flow diagram for CCIs is presented in Exhibit 1. Field investigators notify PWSs one to two weeks prior to the CCI investigation. Each CCI is designed to address the components described above. During the CCI, the assigned field investigator reviews, examines, verifies, and analyzes records to ensure the proper procedures are being met according to TCEQ’s 30 TAC §290 rules and regulations. This includes calibration records that ensure all equipment meets

laboratory equipment rules. The eight components of a sanitary survey, incorporated into a CCI, are defined in Table A6.

Along with a review of records, the field investigator physically inspects the:

- Intruder-resistant fence
- Well and storage tank
- Pressure tank
- Service pumps
- Treatment system

At the end of the onsite investigation, the field investigators conduct an exit interview with the PWS Responsible Party or Representative. During this exit interview, previous and current deficiencies are discussed, and written documentation is provided to the PWS. The TCEQ CCIs typically take 60 days to conduct from start to finish.

Based on the findings, a notice of violation (NOV), notice of enforcement (NOE), or a compliance letter is written by the field investigator within roughly 60 days of the CCI. The letter is sent to the Region’s assigned QA/QC staff for review. Once the letter is reviewed and approved, the Region’s water section manager or team leader signs and mails it to the PWS. Implementation of CCI corrective action (CA) is outside the QAPP scope.

Table A6 Eight Elements of a Sanitary Survey

EPA Sanitary Survey Required Element	CCI Element	Other TCEQ Functionality
Confirm existence of and describe all active and inactive sources under control of PWS	Yes	Locational data gathered and maintained by WSD. Technical assistance related to SWP provided by WSD
Review and record all treatment used by the PWS	Yes	Disinfection zones established, tracked by WSD. Training modules on treatment provided by OLS, WSD
Review geographic extent of and records related to the distribution system, including population served	Yes	Distribution sample sites approved, tracked by WSD. Compliance with standards tracked, acted on by WSD
Review finished water storage facilities throughout system	Yes	Special assistance provided by WSD for alternate capacity requirements, exceptions.
Review pumps, pump facilities, and controls at systems	Yes	Special assistance provided by WSD for alternate capacity requirements, exceptions.
Review monitoring and reporting and perform data verification for system	Yes	WSD provides primary review of documentation of primary drinking

		water standards. WSD provides compliance and technical assistance related to standards
Review system management and operation	Yes	Financial, managerial, and technical assistance managed under the WSD.
Review operator compliance with state requirements	Yes	OLS is primarily responsible for establishing record of licensed operators, assigning license numbers.

A7 Quality Objectives & Criteria

The TCEQ’s objective for CCI activities is to produce data/information consistent with the overall objective of the SDWA to protect drinking water and public health. Consequently, as the state’s environmental agency, the TCEQ can provide better protection of the health of all Texas citizens currently served by the PWSs and all those who consume water from the systems.

The specific objectives related to CCIs as described below reflect the objectives specified in the Programmatic QAPP. The PWSS Program’s goal for quality objectives related to activities taken by the TCEQ for CCIs, is to produce data and information of a known and verifiable quality that will meet the overall objectives of the SDWA.

The following data quality objectives apply to activities related to CCIs. Data quality objectives are met through a combination of the following: management oversight, peer review and management review of letters and reports, staff training, experience, and coordination, TCEQ guidance documents available to the public, TCEQ SOPs, data security processes, standardized review processes pursuant to the SDWA, CCI checklists, reporting protocols, corrective action procedures, and strict adherence to schedules and allotted timeframes. The TCEQ relies on data of this quality and sets requirements and performance standards accordingly to ensure it makes valid, fair, and defensible compliance conclusions.

Accuracy

Accuracy is a reflection of correctness. To be accurate, CCIs must be unique to each PWS, logical, and representative of the real world. This ensures corrective actions are targeted to actual problems within the PWS.

Comparability

Comparability refers to the degree in which methods or data sets are considered to be similar under similar circumstances. CCIs must be comparable to ensure consistent CCIs over time so that changes in results reflect changes in the environment and problems within the PWS.

Completeness

The completeness of the data is basically a relationship of how much of the data or information is available for use compared to the total potential data. CCIs must be complete and contain all the requisite data (including water quality data) to produce a meaningful report and target valid CAs.

Representativeness

Representativeness refers to the degree to which the data and information accurately represent a specific variable in the population—how well the data reflects the conditions where it was collected.

Data Integrity

CCI data and information are managed in such a way to ensure the confidentiality, integrity, and availability of data and information. Data management policies and procedures ensure data and information are recoverable and only used for their intended purposes.

Compliance

All TCEQ requirements associated with CCIs have been developed to be consistent with state rules and federal regulations pursuant to the SDWA. This ensures all compliance and enforcement actions taken by the TCEQ are fair and justifiable.

Note: CCIs do not involve the collection of measurement data. However, field investigators do side-by-side measurement comparisons during CCIs to determine if PWS operators calibrate equipment and take measurements according to 30 TAC §290.46(s)(2)(C). This is to ensure that minimum chlorine residuals in each finished water storage tank and throughout the distribution system are measured, maintained, and reported appropriately at all times.

See Section B5 for measurement performance and data acceptance criteria as they pertain to side-by-side comparisons of PWS measurements during CCIs.

A8 Special Training/Certifications

TCEQ personnel performing work on this project are qualified/trained to perform their assigned work per the TCEQ QMP and Section A8 of the Programmatic QAPP document.

A8.1 PWS Field Investigator Training

Training programs and qualification requirements specific to field investigators are specified in the most recent version of the PWS Investigator's Manual (See Table A9). Depending on the level (basic or senior), professional development plans (PDP) require a combination of safety training and health monitoring, on the job training, formal training courses, and required demonstrations of proficiency with sampling and monitoring equipment. Training includes, but is not limited to the following items.

- Agency training including Effective Time Management, Emotional Intelligence, etc.
- Occupational Safety and Health Administration (OSHA), 29 Code of Federal Regulations (CFR) Section §1910.120 40-hour certification, and current 8-hour refresher training.
- Driving safety.
- Annual PWS Programmatic Training (see description below).
- Comprehensive OCE Equipment Training (see description below).
- Continuing education classes offered by the Texas Rural Water Association, Texas Water Utilities Association, Texas A&M Engineering Extension Service, etc.

A8.2 Annual PWS Programmatic Training

OCE hosts programmatic training on even numbered years for advanced field investigators and on odd numbered years for all other investigators. The WSD participates as requested. These trainings are very comprehensive and involve both general and break-out sessions, as well as field trips. Training agendas vary year-to-year but may include the following types of topics.

- pre-investigation planning
- groundwater CCIs
- surface water CCIs
- pressure complaints
- backflow and cross-connection control
- water quality complaints
- corrosivity evaluation
- PWSS Program updates on rules

A8.3 Comprehensive OCE Equipment Training

All field investigators take OCE equipment training to ensure that they are capable of collecting valid and defensible environmental measurement data; and demonstrate proficiency in the use of equipment by successfully completing an individual demonstration of analytical capability (IDAC) as specified in the Field Operation SOP Investigation Guidance (see Table A9).

Field investigator PDPs documenting basic and senior level training are maintained in the OCE PSS.

A9 Documents and Records

The documents and records that describe, specify, report, or certify field and laboratory activities are listed in Table A9.

Table A9 CCI Documents and Records

Document or Record	Purpose	Format/Location
Guidance Document for Field Operations Investigations of Complaints	Guidance for TCEQ staff when there is an event which the complainant alleges a possible environmental, health, and/or regulatory concern and the complainant is requesting action to be taken by the TCEQ	Electronic/FODWEB website maintained by OCE PSS
Basic Curriculum: Professional Development Plan for PWS Investigators	TCEQ field operations training requirements for entry level staff	Electronic/FODWEB website maintained by OCE PSS
Senior Curriculum: Professional Development Plan for PWS Investigators	TCEQ field operations training requirements for senior level staff	Electronic/FODWEB website maintained by OCE PSS
Field Investigator Professional Development Plans	Record of training for all field investigators that conduct CCIs	Hard copy tracking of training maintained by OCE PSS
Investigative Checklists	TCEQ web page that provides criteria used by TCEQ investigators for PWSs to prepare for CCIs.	Electronic/ https://www.tceq.texas.gov/compliance/investigation/checklists/waterchecklists
Customer Satisfaction Survey (CSS)	Interactive website to allow customers to comment on TCEQ's customer service to promote continued improvement	Electronic https://www.tceq.texas.gov/customerurvey
RG 344: TCEQ has Inspected Your Business. What does this Mean to You?	TCEQ regulatory guidance that summarizes enforcement processes, basic rights, and responsibilities	Electronic https://www.tceq.texas.gov/assets/public/comm_exec/pubs/rg/rg-344.pdf
RG 456: I received a Field Citation. What happens next?	TCEQ regulatory guidance that explains processes to regulated entities when field citations are issued.	Electronic https://www.tceq.texas.gov/publications/rg/rg-456.html/view
Field Operations Division Public Water Supply Report Writing Protocol	TCEQ regulatory guidance that explains the process in writing accurate, completed and detailed investigative reports	Electronic FODWEB website maintained by OCE PSS
CCI reports and letters	CCI letters and reports summarize the results of CCIs and include notifications of compliance or violations. OCE	Hardcopy reports and letters are stored in Central Records.

	sends letter to the PWS. OCE sends a copy of the letter and hard copy report to the WSD Inventory Team if information is needed to update SDWIS.	
CCI data	CCI electronic results of investigations	Electronic data stored in CCEDS, SDWIS, and PWS Database.
CCI Checklists and Field Notes	Documentations of items reviewed during a CCI	Hard copy records retained by investigators
Field Operation Standard Operating Procedure (SOP) Investigation Guidance	TCEQ standard operation procedures for pre-investigations, investigations and post investigations	Electronic/FODWEB website maintained by OCE PSS
SOP for Hach Pocket Colorimeter TM II Monochloramine + Ammonia	TCEQ regulatory guidance manual when collecting chlorine residual data for regulatory and environmental monitoring purposes	Electronic/FODWEB website maintained by OCE PSS
SOP for Potable Water Pressure Gauge	TCEQ regulatory guidance manual for using a pressure gauge to measure water pressures between 0-100 pounds per square inch	Electronic/FODWEB website maintained by OCE PSS
SOP for Hach DR/820 Pocket Colorimeter	TCEQ regulatory guidance manual when collecting chlorine residual and iron concentration data for regulatory and environmental monitoring purposes	Electronic/FODWEB website maintained by OCE PSS
SOP for DICKSON PR (125 AND 150) PRESSURE DATA LOGGER	TCEQ regulatory guidance manual for logging pressure data	Electronic/FODWEB website maintained by OCE PSS
SOP for Hach Color Test Kit Model CO-1	TCEQ regulatory guidance manual for collecting chlorine residual data for regulatory and environmental purposes	Electronic/FODWEB website maintained by OCE PSS
SOP for Hach Model 2100 Portable Turbidimeter	TCEQ regulatory guidance manual for collecting turbidity data for regulatory and environmental purposes	Electronic/FODWEB website maintained by OCE PSS

Documents and records are retained in accordance with the TCEQ's record retention schedule and consistent with regulatory requirements.

(B) Data Generation and Acquisition

B1 Sampling Process Design

Tests conducted by the PWS field investigators during a CCI (i.e., chlorine residual and pressure measurements) are performed to check the PWS operators' ability to perform the tests correctly, see section B5.

The tests are performed side-by-side with the PWS operator in situ and do not involve planned sampling processes.

B2 Sampling Methods

Not Applicable. See Section B1.

B3 Sample Handling & Custody

Not Applicable. See Section B1.

B4 Analytical Methods

Field investigators conduct chlorine and pressure measurements according to SOPs listed in Table A9. SOPs are used by investigators in tandem with manufacturer's instruction manual for the equipment used by the individual regions.

During CCIs performed at surface water treatment plants field investigators confirm PWS operators are utilizing appropriate analytical methods through review and confirmation of TCEQ Laboratory Approval documentation.

B5 Quality Control

CCI project staff ensure adherence to the quality control objectives for CCIs by implementing a combination of management oversight, peer and management review of letters and reports, staff training, experience and coordination with other staff, standardized review processes pursuant to the SDWA, use of CCI checklists, and strict adherence to schedules and allotted timeframes.

The quality control (QC) checks described in this section involve the checks that field investigators perform during a CCI to ensure a PWS operator's performance of chlorine and pressure measurements are performed correctly.

During the CCI, field investigators do side by side comparisons to determine if PWS operators calibrate disinfection equipment (including both bench top and continuous testing equipment) according to 30 TAC §290.46(s)(2)(C) so that minimum chlorine residuals in each finished water storage tank and throughout the distribution system are measured and maintained appropriately at all times.

For example, PWS operators must ensure the accuracy of manual disinfectant residual analyzers are verified at least once every 90 days using chlorine solutions of known concentrations. In addition, free chlorine or chloramine residual (measured as total chlorine) must be measured to a minimum accuracy of plus or minus 0.1 milligrams per liter.

Color comparators can be used for distribution system samples only. When used, a color comparator must have current reagents, and an un-faded and clear-color comparator, and a sample cell that is not discolored or stained, and must be properly stored in a cool, dark location where it is not subjected to conditions that would result in staining. The color comparator must be used in the correct range. If a sample reads at the top of the range, the sample must be diluted with chlorine-free water, a reading taken, and the resulting residual calculated.

Field investigators verify these requirements by reviewing calibration records as well as performing side by side testing with the PWS operator. PWS operators QC their own chlorine testing equipment in accordance with manufacturer instructions.

B6 Equipment Testing, Inspection, and Maintenance

Field investigators are responsible for cleaning and maintaining agency equipment used to conduct CCIs. Equipment testing, inspection, and maintenance is conducted in accordance with manufacturer recommendations and SOPs described in Table A9.

B7 Equipment Calibration and Frequency

Field investigators calibrate equipment according to the analytical SOPs listed in Table A9.

B8 Inspection / Acceptance of Supplies & Consumables

Supplies and consumables used by field investigators are controlled to ensure that analysis results are reliable and consistent. All supplies comply with the criteria and standards designated in the TCEQ PWS Investigator's Manual, Standard Methods for the Examination of Water and Wastewater, the Drinking Water Sampling Guide, and applicable EPA Drinking Water Methods or state/federal regulations, as applicable.

B9 Non-Direct Measurements

Not Applicable.

B10 Data Management

After a CCI is conducted, the field investigator enters the investigation data/information into CCEDS in accordance with the CCEDS Online User Guide.

Field investigators incorporate investigation data/information into complete CCI reports for every inspection of a PWS. Once the field investigator completes the draft CCI report and drafts the required letter(s), the investigator assembles the investigation package and submits it to the appropriate Regional staff member for the "Quality Review" procedure, if required.

OCE management review the investigation packages to ensure completeness and accuracy. Once the investigation package meets the quality review requirements, it is signed, approved, copied, and distributed. Reports are routed to CFR. Region updates SDWIS inventory data, any changes to contacts or treatment are routed to WSD for data entry.

(C) Assessment and Oversight

C1 Assessments and Response Actions

C1.1 Corrective Actions (CA)

All project participants involved with work associated with this QAPP are responsible for identifying deficiencies when there are nonconformances with required procedures specified in it, including referenced documents. Deficiencies may be identified internally or externally during the performance of routine work or during audits and oversight, such as:

- Routine quality control procedures
- Observations
- Audits
- Management reviews
- Feedback from customers

Most nonconformances are not "deficiencies" as addressed in this section. Project participants routinely encounter, document, and correct technical or procedural nonconformances at the point of origin using established procedures. These nonconformances are documented at the point of origin and are maintained with the applicable project records.

However, the level of corrective action described in this section may be warranted if established procedures don't prevent a situation from recurring, if the error is a unique nonconformance, or if it is determined to be a significant deviation.

C1.1.1 Deficiencies Requiring a Corrective Action Plan (CAP)

Deficiencies are unique nonconformances that cannot be corrected by established procedures and will require actions to be defined and documented in a corrective action plan (CAP). Upon detection of a deficiency, staff are responsible for notifying their management in writing.

Deficiencies requiring a CAP may be identified and initiated by a project participant or a CAP may be requested by the PWSS Program Lead Quality Assurance Specialist, or designee. CAPs must be documented and submitted to PWSQA@tceq.texas.gov within 14 days of notification.

For this project, deficiencies may involve, but are not limited to the following situations.

- CCI results or conclusions are jeopardized
- Nonconformances with state or federal regulations
- Intentional misrepresentation of data or information
- Repeat nonconformances or deviations from standard practices

The preparation of CAPs is assigned to appropriate staff by managers who are responsible for assuring that CAPS are:

- Appropriately prepared, reported, implemented, and verified effective.
- Implemented in ways that will most likely eliminate the problem and prevent recurrence.
- Forwarded to PWSQA@tceq.texas.gov within 14 days of initial notification.

The PWSS Program Lead Quality Assurance Specialist, or designee, receives and reviews CAPs to determine if actions planned to resolve the deficiency are acceptable, provides feedback on any items determined to be insufficient, tracks reported CAPs, and may monitor implementation. Appropriate staff may be designated to review and track corrective actions that are not deemed significant, as described in C1.1.3.

C1.1.2 Required Content for a CAP

The procedure for preparing a CAP following the identification of a deficiency begins with an investigation to determine the root cause(s). Procedures for CAPs are specified in laboratory, contractor, or PWSS Program SOPs. Management selects and implements CAPs that will mostly like eliminate the problem, prevent recurrence, and are appropriate for the magnitude and degree of risk of the deficiency.

CAPs must include the following information:

- Description of the deficiency
 - What happened, how was it identified, and the date identified?
- Root cause
 - What was the underlying cause? Why did the deficiency occur?
- Programmatic or data impact(s)
 - How did the deficiency affect data or program decisions and what was reviewed (including timeframe) to determine the impact?

- Corrective action taken
 - What was done to correct the deficiency?
- Timeline for corrective action(s)
- Documentation
 - How will the corrective action(s) be documented?
- Actions to prevent recurrence
 - What actions will be taken to prevent the deficiency from occurring again?
These must be distinctly different from the corrective actions.
- Timeline for action(s) to prevent recurrence
- Documentation
 - How will the preventative action(s) be documented?
- Verification of effectiveness
 - Who will verify effectiveness, when will verification occur, and how will verification be documented?

The TCEQ QA Program has developed a standardized template form that may be used, TCEQ QAF-005. This template can be accessed through the TCEQ Quality Assurance webpage at <tceq.texas.gov/agency/qa>. The form is also available by request at PWSQA@tceq.texas.gov.

C1.1.3 Significant Deviations

The PWSS Program Lead Quality Assurance Specialist determines whether an identified or reported deficiency is a significant deviation as defined by, but not limited to, any of the following:

- It jeopardizes the integrity of results or conclusions.
- Results in non-conformance with state or federal regulations.
- Was associated with the intentional misrepresentation of data or information.

The Lead Quality Assurance Specialist will forward information related to CAPs for significant deviations as described within the Programmatic QAPP, Section C1.1.3.

C1.2 Authorization to Stop Work

TCEQ management will authorize work stoppage if conditions are identified that indicate compliance is in jeopardy or if primacy requirements are not being met. The PWSS Program Lead Quality Assurance Specialist, applicable Grant Manager(s), or TCEQ QA Manager may also request a work stoppage.

C2 Reports to Management

OCE field investigators report to their individual regional water section managers concerning all CCIIs, all complaints, and any other drinking water issues encountered in their duty assignments on at least a per monthly basis. Water

section managers, as appropriate, report to their individual regional directors who report to the OCE Area Director for their region. The OCE Area Directors report directly to the OCE Deputy Director in Austin.

CAPs and reports of significant corrective actions are reported to affected Division Directors and the PWSS Program Quality Assurance Specialist as described in Section C1.

(D) Data Review and Usability

D1 Data Review, Verification, and Validation

This section defines the review processes to ensure CCI work products (i.e., data/information) are of known and defensible quality consistent with objectives specified in section A7. The review of data and information involves verification as defined below.

Verification: Evaluating the completeness, correctness, and conformance/compliance of a specific data/information set against method, procedural, or contractual requirements described in this QAPP.

The review of CCI work products involves the verification of reports and data/information as specified in Section D2 to ensure they are complete, correct, and comply with regulatory and procedural requirements to determine acceptance of CCI data/information, letters, and reports are either deemed acceptable or unacceptable based on the verification of reports and data. Situations do not exist in which data or information are qualified for use by data users.

D2 Verification and Validation Methods

The post investigative/review phase of the CCI involves the following activities conducted by OCE field investigators to verify data, letters, and reports before they are completed.

- Access Secretary of State, Appraisal District, Central Registry, Westlaw to ensure correct information (as needed)
- Send core data forms, updated forms to Central Office for changes (as needed)
- Update CCEDS report with resolved or active violations, if applicable
- Update Drinking Water Watch Summary Sheet
- Update the PWS Database System (SDWIS) with updated population
- Review the CCI report
- Turn complete report in for peer review
- Turn report in to Water Section Manager for review
- Report discrepancies for sampling sites to the DWQT
- Send Report to the Drinking Water Inventory and Protection Team (DWIPT)

The DWIPT compares data in reports against SDWIS (e.g., ownership, contact information, source facility, population, connections, and capacity) and updates SDWIS as necessary.

D3 Reconciliation with User Requirements

The final work products of CCIs involve data, letters, and reports which are finalized when the post-investigative/ review and verification steps described in Section D2 are implemented. If a CCI results in a field citation the PWS has options available to them which are addressed in TCEQ RG-456, *I Received a Field Citation, What Happens Next?* One option involves declining the violation if the PWS disagrees with the violation(s) and entering into discussions that may resolve or settle the enforcement matter or lead to litigation for resolution.

Exhibit 1: Workflow Diagram of a CCI

