Quality Plan

Domestic and Industrial Wastewater Programs

Florida Department of Environmental Protection
Division of Water Resource Management

Southwest District Office
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1.1 Signature Page

Plan Coverage: The Quality Plan summarizes the Domestic and Industrial Wastewater programs (Wastewater Program) quality systems that are used within the Department. The plan covers quality assurance policies, roles and responsibilities for environmental data collection activities, and the evaluation and use of environmental data produced by laboratories and regulated facilities.

The undersigned have read and understood this Quality Plan, are charged with managing and improving the quality system, and are responsible for ensuring that all staff properly execute the procedures discussed in the plan.

_____________________________________5/16/2016_____

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1.2 Table of Contents

1.3 Abbreviations

List of abbreviations used in this Quality Assurance Plan:

DCS:	Data Control Specialist
DEO:	Data Entry Operator
DEP:	Florida Department of Environmental Protection
DMR:	Discharge Monitoring Report
DQO:	Data Quality Objectives
EPA:	The U.S. Environmental Protection Agency
ICIS	Integrated Compliance Information System
MDL:	Method Detection Limit
NELAC:	National Environmental Laboratory Accreditation
NPDES:	National Pollutant Discharge Elimination System
PAI:	Performance Audit Report
PCS:	Permit Compliance System
PQL:	Practical Quantitation Limit
QA:	Quality Assurance
QMP:	Quality Management Plan
SAS:	Standards and Assessment Section
SOP:	Standard Operating Procedure
WAFR:	Wastewater Facility Regulation
WRAT:	Water Resource Assessment Team

2.0 Introduction

The DEP Quality Assurance (QA) program involves the implementation of a management system (planning, review, training, and assessment) to ensure that data collection, generation, interpretation, reporting, evaluation and archiving is of sufficient quality to support the program's decisions. The effectiveness of Wastewater's QA program is dependent upon the actions of all DEP staff, from field staff to management, meaning QA is a function distributed throughout this organization. One requirement of the Wastewater program is to ensure that all QA activities are carried out according to the commitments made to the Environmental Protection Agency as enumerated in the DEP Quality Management Plan (QMP, 2008).

The DEP Secretary is committed to implementation of the quality assurance requirements in the QMP, as authorized in Section 403.0623, F.S. and chapter 62-160, F.A.C. (the DEP QA Rule). It is the Secretary's intent to carry out these obligations and requirements as detailed in the Department's QA Directive- DEP 972, effective September 18, 2009.

The Wastewater QA Plan explains both the process and criteria by which the quality system is managed. The plan is utilized as an instrument of internal communication between Tallahassee and the districts to inform staff members of current and future quality assurance activities. It assigns specific QA duties to Tallahassee and district staff. Wastewater will revise the QA Plan as needed to ensure the consistent application of procedures and criteria for the generation and use of data. The QA Plan will also be used as a training document for new staff members and as a reference for experienced personnel. The plan and its revisions also serve as an archival record of Wastewater's formal quality system. Wherever appropriate, existing internal and external documents, including training manuals, guidance documents, SOPs and Rules are cited.

The elements of the Wastewater QA Plan are consistent with the Department's Quality Management Plan, Quality Assurance Directive, Quality Assurance Rule (chapter 62-160, F.A.C.), and Standard Operating Procedures (SOPs). The Wastewater QA Plan addresses all activities associated with sampling, field testing, lab analysis, data review, interpretation and activities associated with database management. This QA Plan also discusses how data decisions are made based on data quality assessments.

In order to execute the components of the DEP QA Directive, the Wastewater Program first developed a quality system. This document describes the steps taken to ensure the scientific and legal defensibility of environmental data generated or used. It details the process of planning, training, execution, assessment and corrective actions undertaken to ensure that environmental data meets the Department's established quality criteria.

3.0 Policy Statement

The Wastewater Program is strongly committed to sound science and QA practices, which produce environmental data of appropriate quality to be used for permitting, compliance, and enforcement decision making purposes. Therefore, it is the policy of the Wastewater Program to:

- Use scientifically valid and legally defensible data for decisions affecting permitting, compliance, and enforcement projects that relate to compliance with ground and surface water quality criteria.
- Maintain, update and implement the QA Plan as outlined in this document.
- Ensure that the Quality Statement is consistent with the provisions of the Department's Quality Assurance Management Plan.
- Ensure that each staff member is properly trained to execute his or her assigned tasks and job functions.
- Implement procedures to evaluate the quality of district output such as water quality data, reports and any other associated documents that are used to make permitting, compliance, and enforcement decisions in order to make sound environmental decisions.
- Implement procedures to provide reasonable assurances that QA objectives and criteria specified in this manual will be met.
- Periodically audit the performance of the program’s data collection, record-keeping, reporting and management activities.
- Perform a yearly systematic assessment of district QA activities, documenting corrective actions. Submit findings to the districts Quality Assurance Officer and the Standards and Assessment Section.

The Wastewater Program will assure that there are sufficient QA activities conducted by the program to provide reasonable confidence that all environmental data generated is scientifically valid, representative and legally defensible. Data quality is the responsibility of all managers and staff members who are involved in its collection and interpretation. Senior managers are responsible for assuring that adequate resources are available to implement the program’s quality assurance plan.

3.1 Ethics

All employees of the DEP are held to high professional ethical standards in the performance of their duties. All employees are required to commit to honesty and integrity in performance of their duties. In addition, all employees are required to attend an annual ethics training class. Improper, unethical or illegal actions are addressed according to the published Administrative Directives of the Florida Department of Environmental Protection.

4.0 Organization and Responsibilities

The Wastewater Program’s responsibilities reside in Tallahassee and six district offices within the Division of Water Resource Management.

4.1 Tallahassee Data Management Organization and Function

Tallahassee data management receives documents and enters all the Federal NPDES (surface water discharge) Discharge Monitoring Reports (DMRs) into EPA's Integrated Compliance Information System (ICIS) database for the domestic and industrial wastewater programs. Groundwater monitoring data that is associated with NPDES facilities is also entered into the Division's Wastewater Facility Regulation (WAFR) database. Tallahassee also enters non-NPDES (land application) DMRs and groundwater monitoring data for the Central and Northwest District offices. The Northeast, Southwest, South, and Southeast District Offices receive, document, and enter into WAFR the remainder of the state's non-NPDES (land application) and groundwater monitoring DMRs for the domestic and industrial wastewater facilities.

4.2 Tallahassee Data Entry Responsibilities

DMRs must be received in Tallahassee by the 28th day following the end of the reporting month where they are then stamped as received and entered into the DMR Log. DMRs are then reviewed (NPDES only) to determine if any of the following information is incorrect before continuing with the data entry: permit number, monitoring period, outfalls, monitoring location codes, dates, duplicate DMRs, and parameters that do not match the DMR. If a DMR needs minor corrections, the Data Entry Operators (DEOs) will try and correct the problem themselves prior to data entry. If the problem cannot be fixed in Tallahassee, the DMR is returned to the district for follow-up with the facility to make the corrections and to resubmit the DMR to Tallahassee for re-entry.

Once the DMRs are entered into ICIS, they go through an electronic data validation process to determine if numeric exceedances exist and to flag them in the data system. All exceedances that are flagged are then reviewed by staff for data entry mistakes and verified.

At the beginning of each week, an ICIS Weekly Report is run on the previous week's entered DMR data to review and verify whether any of the listed exceedances are valid. The DEOs then pull the DMRs with the flagged exceedances and route them to the Compliance Coordinator to verify the exceedances, and to check for DMR format errors or data entry errors. If the Compliance Coordinator determines that the exceedance is a data entry error, the DMR is re-routed back to the DEO for correction, and the DEO files the DMR in Oculus.

4.3 District Data Management Organization and Function

There are six district offices in the state, four of which are responsible for receiving, documenting, entering, and reviewing DMR data for non-NPDES domestic and industrial wastewater facilities and any groundwater monitoring data associated with them. They are the

Northeast, Southwest, South, and Southeast District Offices.

4.4 District Data Entry Responsibilities

The Southwest District receives DMRs directly from the non-NPDES facilities, and the assigned inspectors review and sign the DMRs before sending them to the SWD DEO. The DEO then enters DMR data into the WAFR data management system. Data interpretation and validation is done manually by district staff at the time of permit renewal or during routine inspections to determine if there are DMR format problems or numeric effluent violations. District staff members work with facilities to correct any DMR format problems identified. If numeric exceedances are identified during the data review process, enforcement may be initiated depending on the frequency and severity of the exceedances.

4.4.1 District Wastewater Program Data Review Process

Data received in the district offices, whether from their own sampling efforts, DMRs, or permit renewal applications, must be reviewed for data quality assurance prior to making permit and/or compliance and enforcement decisions. District staff members review the data to determine its reliability and usability for determining compliance with permits, enforcement orders and/or rules. Quality Assurance Officers periodically coordinate and participate in evaluation and interpretation of program data and provide oversight to staff to ensure that the QA objectives meet Department requirements.

4.4.2 Wastewater Managers' Data Responsibilities

Managers and supervisors are responsible for ensuring that data collection activities within their programs are conducted in accordance with the Department policies and comply with the directions established by the District QA Officer and the Standards and Assessment Section (SAS). Key responsibilities of managers include:

- Establish planning policies to ensure that appropriate QA procedures are reflected in program and operating plans.
- With the assistance of the QA Officer, encourage the development of Data Quality Objectives (DQOs) for data collection activities and review.
- Support and reinforce local quality system implementation and assessment.
- Take corrective action on deficiencies identified by the QA Officer during local assessments and overviews.
- Ensure that all staff members receive appropriate QA training by the district QA Officer and/or SAS staff.
- Ensure that all staff members follow established QA responsibilities and evaluate each staff member's effectiveness during annual performance evaluations.

4.4.3 District QA Officer's Responsibilities to the Wastewater Program

The district QA Officer's responsibilities include:

- Training staff members in proper review, documentation, and handling of data to ensure that follow-up activities are pursued in a manner consistent with Department policy and QA objectives.
- Conducting routine Performance Audit Inspections (PAI) of external data generators (contract and/or permitted facility laboratories).
- Ensuring that corrective actions are implemented for deficiencies identified during routine PAIs.
- Conducting internal audits of the district's sample handling and collection activities.
- Assisting program staff in the development of a Quality System that would benefit the program's individual DQOs for sampling and data review and interpretation.
- Documenting all program QA activities including training, internal and external audits and corrective actions. This information must be provided to the DEP Standards and Assessment Section on a periodic basis.
- Attending meetings scheduled by the Standards and Assessment Section to keep abreast of QA issues affecting the Department and relay the information to the appropriate district staff members.
- Working with Wastewater staff on a routine basis to develop and maintain an effective QA program.
- Responding to staff inquiries regarding quality assurance issues, problems, and requests for guidance and/or technical direction in an effective and timely manner.

5.0 District Sample Collection and Data Interpretation Activities

Each district office is responsible for conducting its own compliance/enforcement sampling activities in support of the domestic and industrial Wastewater programs. The Wastewater Program of Southwest District performs activities ranging from simple fecal coliform sample collection to comprehensive multi-day, multi-media sample collection in support of permit renewal.

District staff must be proficient in sample collection and handling techniques and in data interpretation once the results are available for review. Each district has its own DQOs in order to meet individual program and technical needs as established for the programs they support. It is the responsibility of the district QA Officer to ensure that these requirements are met and guidelines are in place to evaluate how well staff are complying with and meeting these objectives.

The Wastewater Sampling Team and the District QA officer will support the Wastewater Program's compliance needs by providing technical assistance in sample collection activities and data interpretation when needed. This will reinforce and enhance the effectiveness of the program's QA objectives in providing accurate and reliable data to support the data needs of the program. Specific responsibilities of the sampling team and the district QA officer are to:

- Provide the Wastewater Program with technical assistance in sample handling, collection, and data interpretation, in conformance with the DEP Sampling SOPs cited in rule 62-160, F.A.C.: Standard Operating Procedures.
- Identify the Wastewater Program's QA needs, resolve problems, and answer requests for guidance or assistance.
- Conduct/participate in technical program audits.
- Report data quality problems to appropriate Wastewater Program managers and supervisors.
- Conduct QA performance audits of internal and external sampling data when requested.
- Randomly review data generated from external permitting, compliance and enforcement activities.
- Implement corrective actions as necessary and as required by the District's Quality Assurance Plan.

6.0 Tallahassee Analytical Support Activities

Tallahassee's Central Laboratory and Biology Section assist the district's Wastewater Program by providing chemical and biological analytical support for compliance, enforcement, and permitting purposes.

6.1 Chemistry support provides:

- Sample kits to the districts with the appropriate containers and preservatives (if requested) to support the chemical sampling needs of the Wastewater Program's compliance objectives.
- Analysis of all samples received following appropriate analytical methods and procedures for analysis, data interpretation, and reporting.
- Technical support to the districts for sample collection, handling and interpretation as needed.
- A model for all department policies, procedures and DQOs for chemical analysis, as established by the Bureau of Laboratory's Standard Operating Procedures: Chemical Analysis SOPs

6.2 Biology support provides:

- Sample kits to the districts with the appropriate containers and preservatives (if requested) to support the biological sampling needs of the Wastewater Program's compliance objectives.
- Analysis and interpretation of all biological data using all methods and procedures developed and established by the Tallahassee biology section.
- Compilation, interpretation and a written report summarizing the results of all the

chemical and biological data collected as part of the FYI program.
- Technical support to the districts for sample collection, handling and interpretation as needed.
- A model for all Department policies, procedures, and DQOs for biological assessments as established by the Bureau of Laboratory's Standard Operating Procedures: Biological Analysis SOPs

Data that are manually verified must go through the following series of validation steps to ensure that the data was generated correctly:

- Correct and complete transcription of the DMR data.
- Methods used by the lab must meet the analytical requirements of the program.
- Spike and duplicate are routinely run to verify repeatability.
- Method Detection Limits (MDL) and Practical Quantitation Limits (PQL) are met to meet established permit limitations.
- Laboratory meets established holding times.
- Laboratory certification by the Dept. of Health and NELAC.
- Blank requirements are routinely followed.
- All other established criteria and standards are met.

7.0 Corrective Actions

Procedures are in place to ensure that immediate and effective corrective actions are taken when a laboratory's data quality fall outside established DQOs, data acceptance criteria, or quality assurance requirements. These procedures also apply to internal data generated by the District staff.

The corrective actions process keeps management informed when corrective actions are necessary for either externally or internally generated data. This is accomplished through the routine inspection process or enforcement process for externally generated data, and through coordination with the QA Officer for internally generated data. If the corrective actions process that is initiated by the District is not sufficient to warrant the expected outcome, the SAS may be summoned to assist in reaching a solution.

8.0 Training

All staff members are properly trained to perform their duties. Supervisors and QA Officers will periodically assess and verify that staff performance conforms to the policies and procedures established by the Wastewater Program and the Department.

8.1 QA Training Activities and Procedures

- Training for staff in specific QA functions as outlined by the program and QA Officer.
- Annual ethics policy course with the QA Officer.
- Maintain, update, and provide specific training materials to staff on routine program requirements and QA activities.
- Provide routine refresher courses to staff on updated QA information and procedures.
- Annually evaluate the effectiveness of the QA Officer's training for program staff.

8.2 Internal Audits

Annual Audits by the SAS section and the QA Officer provide valuable and objective feedback concerning the effectiveness of the Wastewater Program's quality system, and may identify areas that need improvement. However, successful implementation of the Wastewater Program's QA program relies heavily on the submission of valid data which begins with proper sampling, handling, data analysis, and data interpretation.

9.0 Report Compilation

Provide the SAS section with information regarding the Wastewater Program's ongoing QA efforts; compile and present all the results to the Secretary and EPA in an annual report.