Quality Plan for
Phosphate Management Program
Division of Water Resource Management

Florida Department of Environmental Protection

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Signature Page

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.

Vishwas Sathe 2/6/2015
[Environmental Administrator] Date

George Sharrock 2/5/2015
[Environmental Manager] Date

Victoria Sowell 1/27/2015
[QA Officer] Date

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 Department decisions. The effectiveness of our QA program is dependent upon the actions of all DEP staff, from “front line” employees to management, meaning QA is a function distributed throughout our organization. One aspect of our program is to ensure that Department QA activities are carried out according to commitments made to the Environmental Protection Agency as enumerated in the DEP Quality Management Plan (QMP) (Draft Revision 9/2/08).

The DEP Secretary is committed to implementation of the quality assurance requirements in the QMP and as authorized at 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 (Draft Revision January 2008).

Wastewater's 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 Phosphate Management to inform our staff of current and future quality assurance activities. It discusses how specific QA duties are assigned to Tallahassee and Phosphate Management staff. Wastewater will revise their Quality Plan as needed to ensure the consistent application of procedures and criteria for the generation and use of our data. The Quality Plan will also be used as a training document for new staff and as a reference for experienced personnel. The plan and its revisions also serve as an archival record of our formal quality system. Where appropriate, we cite existing internal and external documents, including training manuals, guidance documents, SOPs, Rules, etc.

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

In order to execute the components of the DEP QA Directive, our unit has developed a quality system. This document describes the steps we take to ensure the scientific and legal defensibility of environmental data we generate or use. It details the process of planning, training, execution, assessment and corrective action we undertake to ensure that environmental data meets our established quality criteria.

Basic Elements of Our Quality Plan

Our Quality Plan explains both the process and criteria by which the quality system is managed. The plan is utilized as an instrument of internal communication to inform our staff of current and future quality assurance activities. It discusses how specific QA duties are assigned to responsible staff. We will revise our Quality Plan as needed, and pledge to ensure the consistent application of procedures and criteria for the generation or use of our environmental data. The Quality Plan will also be used as a training document for new staff and as a reference for experienced personnel. The plan and its revisions also serve as an archival record of our formal quality system.

The elements of our plan are consistent with the Department's Quality Management Plan, Quality Assurance Directive and Quality Assurance Rule (62-160 F.A.C.). In addition, we ensure that our plan for all sampling activities, including field-meter testing, is consistent with DEP SOP FA 3300. Our plan addresses all activities associated with sampling, field testing, lab analysis and data review of any type, including those activities associated with database construction and management. Our plan also discusses how decisions about data use are made based on data quality assessments.

Where appropriate, we cite existing internal and external documents, including training manuals, guidance documents, SOPs, Rules, tables, etc.

We expect all staff to understand and follow the procedures and criteria as discussed in this plan, and to carry out their assigned responsibilities for effective utilization of our quality system.

Policy Statement

It is Phosphate Management's policy to:

- Use scientifically valid and legally defensible data for our decisions affecting protection of the environment
- Have and implement the Quality System described in this document
- Adaptively manage our Quality System to be consistent with provisions of the DEP Quality Assurance Management Plan
- Ensure that each individual is properly trained to execute their assigned functions
- Implement procedures to evaluate the quality of the data we use and to implement corrective actions when data do not meet our Data Quality Objectives
- Periodically audit the performance and record-keeping practices of data generators we have responsibility for
- Implement quality assurance procedures for the management of our data repositories
- Perform a yearly systematic assessment of our quality assurance activities, including any corrective actions, with the findings submitted to the Standards and Assessment Section

Ethics

All employees of the DEP Phosphate Management Program Unit are held to high professional ethical standards in the performance of their duties. All employees are required to read, understand and sign an 'Ethics Statement' attesting to their commitment 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 will be dealt with according to the published Administrative Directives of the Florida Department of Environmental Protection.

Organization and Responsibilities

Our unit resides within the Division of Water Resource Management.

The function of our unit is to regulate the phosphate industry National Pollutant Discharge Elimination System (NPDES) program delegated by the Environmental Protection Agency (EPA) in the state of Florida. Data is generated for compliance and enforcement purposes and to determine proper effluent monitoring under the NPDES program, in relation to permitting. In addition, our staff also perform field analyses and sample collection of numerous water quality and biological parameters to assist in our understanding of the facilities' role in the NPDES program. These activities include, but are not limited to field meter calibration, field measurements, wastewater sampling, surface water sampling, macroinvertebrate collection and documentation of field event.

Responsibilities for existing staff are as follows:

Our Quality Assurance Officer (QAO) Victoria Sowell (an Environmental Specialist III with the Department) coordinates and participates in the quality evaluation of program data, and provides oversight to ensure that our staff perform their QA functions. The QA Officer may delegate some responsibilities to properly trained and qualified staff, when appropriate. The QAO conducts systems audits of internal and external data generators (lab and field) and conducts sampling performance audits. The QAO also ensures that corrective actions are implemented for data non-conformance incidents as determined by evaluation of the data against our program's Data Quality Objectives. Additionally, the QAO assists program managers in the development of the Quality System and other logistical aspects of its implementation, such as coordinating associated training needs.

Our QAO documents all program QA activities, including training, audits and corrective actions and provides this information to the DEP Standards and Assessment Section on a periodic basis.

In addition to our QAO, an Environmental Specialist II (Anthony Annibali) assists in the field data collection and interpretation for our unit. Other positions in Phosphate Management act as backup field staff is assistance is needed. All technical staff (i.e. Engineers, permit reviewers, compliance officers) review and evaluate data as it relates to permit review or compliance. In addition, staff is responsible to check facility calculations and completeness for accuracy as it relates to the NPDES program.

Our program staff routinely carry out the following duties involving data collection, data usability evaluation, data interpretation, and the generation of DEP work products in a manner that ensures scientific defensibility and adherence to DEP rules and policies. Unit staff review sampling results to determine if the generated data is valid for determination of compliance with permits or rules.

Staff evaluate program data using program Data Quality Objectives (DQOs) and Data Quality Indicators (DQIs) and implement corrective actions as directed by the Quality Assurance Officer. Staff perform the following actions according to the procedures discussed below:

- Review proposed work for conformance with quality criteria (i.e. QAO and staff perform inspections/audits periodically at facilities to assure the facility is meeting DEP-SOP directives)
- Review and evaluate data (i.e. staff are required to review submitted facility data for accuracy)
- Interpret data or determine compliance with permits and rules (i.e. assure the facility is meeting the requirements of any applicable NPDES permit conditions)
- Check calculations (i.e. technical staff are required to verify all material as being correct as it relates to NPDES permitting)
- Review documents for errors and completeness

Program staff provide feedback to the program Quality Assurance Officer for improving the program quality system.

- Victoria Sowell acts as liaison with other units, data providers, data consumers or other external parties concerning QA matters.
- Victoria Sowell and Anthony Annibali answers public or external technical inquiries about data interpretation, approved procedures, suspected QA problems, site-specific issues, etc.

Our unit's management Vishwas Sathe, with the assistance of George Sharrock as the Compliance Coordinator, ensure that this quality system is fully operational within our program, designates our Quality Assurance Officer, and provides general oversight. The unit's manager(s) also evaluates the above Data Quality Objectives and Data Quality Indicators to ensure they meet our program's needs, and with the assistance of the QAO, periodically evaluate the effectiveness of staff's data quality activities, including reviewing audit results. The unit's manager(s) also evaluates corrective action policies and procedures to be implemented when data do not meet program Data Quality Objectives. The manager(s) discuss audit results with the QA Officer, review the annual Quality Assurance Report to the Secretary, and discuss findings with the QA Officer.

An organizational chart is presented in Figure 1 below**.**

Training

All personnel are properly trained to perform their duties. Supervisors periodically assess that our staff performance conforms to the policies and procedures of our unit.

Our training procedures consist of:

- Review of ethics policy with QA Officer (i.e. each staff member utilizes the QAO as a resource for ethical situations)
- Specific training materials for routine functions and designated QA activities (i.e. QAO attends quarterly QA teleconference meetings)
- In-house training for PM staff, as necessary, to cover new rules or practices (i.e. new rule implementations or methodologies accepted by the Department)
- Training for specific QA functions as offered (i.e. Tallahassee meetings or training events)
- On-the-job training for field sampling necessary for job duties, subject to availability of qualified staff (i.e. new staff are trained by more experienced staff or the QAO)
- Specific individual training for staff who will be performing habitat assessments, subject to ecosystem conditions and qualified staff availability (i.e. SCI or Bio-recon sampling as it relates to NPDES by qualified staff)
- Refresher trainings or delivery of updated information, subject to availability of resources (i.e. Numeric Nutrient Criteria (NNC) information, Biocriteria meetings)
- Evaluation of effectiveness of training for each staff member (i.e. staff audit by QAO, performance review by upper management)

Sampling Design and Procedures

Successful implementation of our program relies on valid data, which begins with proper sampling. Therefore, our unit performs the following activities concerning sampling:

- Victoria Sowell designs sampling plans
- Victoria Sowell prepares QA plans and SOPs
- Victoria Sowell reviews procedures and methods for compliance with QA plans and requirements
- Victoria Sowell, George Sharrock, and Anthony Annibali handle requests for use of alternative, new or modified sampling procedures or lab methods
- Victoria Sowell and Anthony Annibali manages or conducts sampling, field-testing and associated support operations
- Victoria Sowell and George Sharrock coordinates data reviews, sampling activities or other QA tasks for timely completion

Data Review

Our program understands the need to evaluate the quality and usefulness of environmental data prior to making decisions. We conduct the following review procedures to determine the usability of data for determination of compliance with permits or rules, etc. These procedures are based on our established Data Quality Objectives and Data Quality Indicators, and incorporate the concepts and criteria found in DEP's "Process for Assessing Data Usability", DEP-EA-001/07.

Therefore, our unit performs the following ways of reviewing data for accuracy and usefulness as it relates to the NPDES permit and compliance process:

- Compare data provided by the facility with known data collected (i.e. Discharge Monitoring Reports, DMRs or State Biological Database system, SBIO) to assure permit compliance
- Meet/speak with facility staff representative to discuss the procedures used to collect data (i.e. inspections, audits)
- Review reports and laboratory analysis to determine corrective actions (i.e. Administrative Orders, Consent Orders)

Documentation

Since accurate documentation is an important factor for determining the success of QA activities, our unit carries out the following record-keeping procedures for the indicated activities to ensure appropriate documentation:

- Sampling
- Field-testing
- Data review
- Calculation checks
- Data archiving
- Checks of database entries
- <u>Document control and maintenance</u>
- Record generation, retention, and storage procedures
- Laboratory logs (i.e. calibration, standards, maintenance)

Please note that any deviation from the Unit's procedures must be documented.

Audits and Corrective Actions

Audits provide objective feedback concerning the effectiveness of our program's quality system, and may identify areas in need of improvement. Therefore, our unit performs the following activities as discussed below:

- Conducts at minimum two audits per year (Performance Evaluation Inspections or Laboratory Systems audits) and compiles audit reports as required by the EPA objectives
- Perform case-by-case evaluation inspections or informal audits occur during sample collection in the field alongside facility staff
- Handles complaints and other reports received from data users and the public concerning data quality
- Reports exceptions to established procedures and criteria
- Devises and implements corrective actions for problems with procedures, data reviews, etc.

Report Compilation

To provide the Secretary with information regarding DEP's ongoing QA efforts, our unit describes and compiles the results of all appropriate QA activities, and relays it to the Standards and Assessment Section for an annual report. Future adaptive management concerning our QA program is based on findings from audits and data reviews.

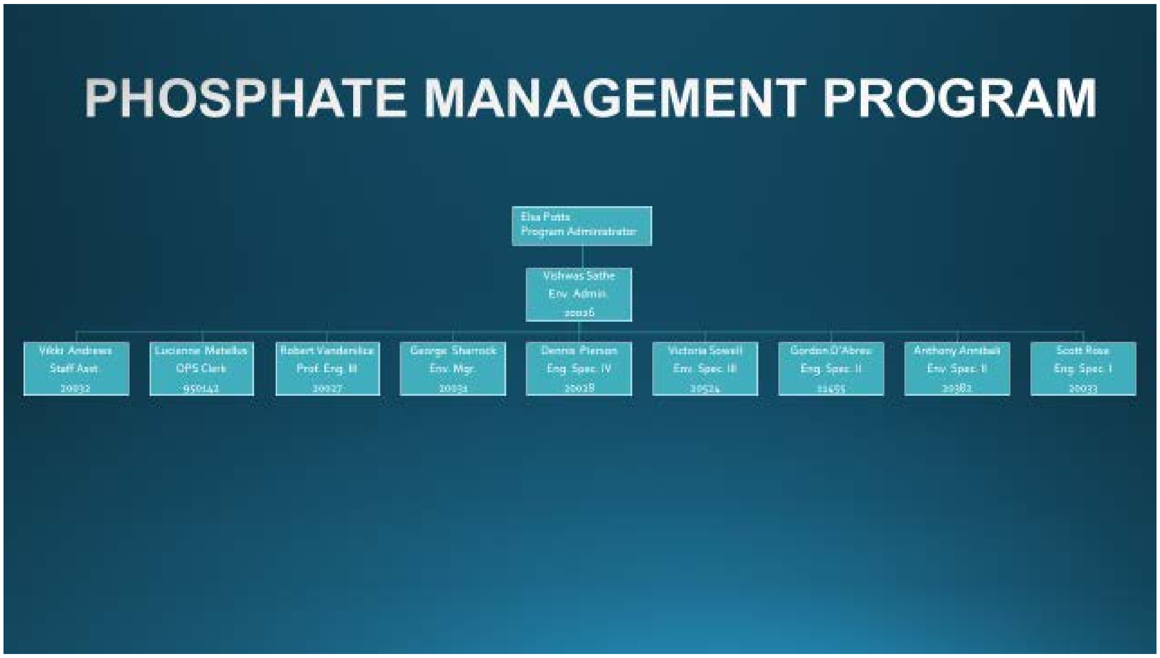

Figure 1: Phosphate Management Program Organizational Chart

References:

FDEP Bureau of Laboratories website: www.floridadep.org/labs
FDEP Quality Assurance Rule, 62-160, F.A.C., DEP-SOP-001/01, and DEP-EA-001/07