



2011 Annual Quality Assurance Report

Southwest District

Executive Summary

The Southwest District (SWD) of the Department of Environmental Protection (DEP) ensures regulatory compliance with all environmental legislation set forth by the U.S. Environmental Protection Agency and state government of Florida.

The 2011 calendar year included a Quality Assurance (QA) training conducted in March, 2011 by the Standards and Assessment Section (SAS) of the DEP. In addition, the SWD QA officer, in conjunction with SAS staff, completed an audit of the 2010 Dissolved Oxygen (DO) Study conducted by the Total Maximum Daily Load (TMDL) program within the Watershed section of the SWD.

There is an ongoing effort by the SWD QA Officer to complete Laboratory Evaluation Inspections (LEIs) for the Domestic and Industrial Wastewater facilities/contract laboratories as a part of every Performance Audit Inspection (PAI). During 2011, a total of five LEIs were conducted by the SWD QA officer.

The SWD QA officer also compiled a list of signatures and initials for staff that regularly sign official documents and/or sample in the field in order to create better traceability and auditability as provided for by Rule 62.160.405, Florida Administrative Code.

In 2012, the SWD QA program plans to focus more on auditing field activities both internally and externally and being able to provide technical assistance to programs in addition to continuing QA related trainings and conducting LEIs for the Domestic and Industrial Wastewater programs.

1. Quality Assurance Training Activities

The SWD conducted or participated in the following QA training activities:

QA Training

The SWD staff participated in a QA training provided by the SAS on March 22 and 23, 2011. The training included both classroom and field activities which addressed the general QA topics relevant to program function, in addition to specific topics requested by DEP staff. The topics covered included: QA directive information, data usability, approved laboratory methods, QA planning documents, and DEP SOP sampling procedures, field audits, laboratory audits, and DEP SOP field testing procedures. There was an additional portion of the training for those staff responsible for monitoring water bodies listed in the “4D” category of impairment. There were also classroom segments targeted for those staff conducting LEIs as a part of PAIs for wastewater facility permits and for district QA officers to coordinate with SAS staff.

2. Audit Activities

The SWD conducted the following audit activities:

TMDL 2010 DO Study Audit

The SWD QA officer, in conjunction with SAS staff, conducted an audit of the 2010 SWD sampling event records for the TMDL DO Study¹. The audit included reviewing the calibration procedures and data for all field instruments used in the study, in addition to the QA documentation procedures utilized by the program during completion of the study. There were some calibration errors revealed during the audit that were mainly attributed to an insufficient calibration log/field sheet. This has since been modified. The only other errors

¹ Technical Support Document: Derivation of Dissolved Oxygen Criteria to Protect Aquatic Life in Florida’s Fresh and Marine Waters, Draft November 2011, FDEP Division of Environmental Assessment and Restoration, <http://www.dep.state.fl.us/water/wqssp/docs/do/do-tech-suppl-doc-110811.pdf>.

revealed involved the thoroughness of documentation. This was resolved through communication with staff about what information is required to be documented for every project [see Quality Assurance Issues and QA Goals for 2012].

Laboratory Evaluation Inspections (LEIs)

The SWD QA officer conducted five LEIs during the 2011 calendar year for Industrial and Domestic wastewater facilities' laboratories and/or contract laboratories. The LEIs were triggered by the PAI process required for permit renewal. All of the audited laboratories had satisfactorily addressed the deficiencies identified during the LEI process. The SWD QA officer did, however, identify a topic for future discussion involving the manner in which laboratory data and procedures are assessed [see Quality Assurance Issues].

3. QA Technical Assistance

The SWD QA officer provided technical assistance on a multitude of different topics to SWD staff (including data reviews and field inspections), other district DEP staff, and external parties such as contract laboratories. One such instance involved providing a QA/QC review of data to assist the Southeast District (SED) DEP with a pending PAI/LEI. This involved sending the SED a copy of a LEI checklist developed by the SWD QA officer. [see Quality Assurance Issues].

4. Quality Assurance Issues

Documentation of Data by SWD Staff

Given that the TMDL DO study records audit revealed several issues regarding calibration and documentation, it is a goal of the SWD QA program to address these issues in detail in order to prevent any future occurrences of such problems. Due to the fact that the calibration/field sheets have since been

modified, many of these issues have already been eliminated simply by having the appropriate prompts and organization of information. With the help of any SAS comments regarding the TMDL DO study records audit, the SWD QA officer intends to create a statement to the TMDL program which outlines the issues and associated corrective actions needed, if not already completed [see Goals for 2012].

Domestic and Industrial Wastewater LEI Checklist

Given that the LEI is of paramount importance in determining whether or not the data for a given facility is accurate, it would be extremely beneficial to develop a checklist streamlining the process. Currently, every staff member who is responsible for conducting LEIs has their own method/checklist of items to address. All LEI reports, therefore, end up addressing different issues and are, at least in the experience of the SWD QA officer, inconsistent with one another. This presents many problems, one of which is that when two different districts audit the same facility, the facility is left wondering why two audits conducted by the same agency can be so drastically different. The aforementioned problem was experienced by SWD during the 2011 LEIs. Many of these issues could be eliminated, and the training of new QA officers and inspectors could be vastly simplified, if a standard procedure and items to address was developed for use by all districts. Although there are many different analytes, for industrial and domestic wastewater, there are multiple analytes which occur in virtually every permit. In addition, although there are many different approved analytical methods, they all include the same recurring themes regarding QA/QC. In the absence of a specific checklist for LEIs it would be very beneficial for all staff who conduct the inspections to have a general list of items that must be addressed and what items should be picked out of the methods to assess during the LEI.

5. SWD Goals for 2012

Training and Guidance

A main goal for 2012 will be to ensure that any past internal QA/QC issues are appropriately addressed and resolved. Thus far, the TMDL 2010 DO Study involved the only internal QA/QC issue identified for 2010/2011. Another TMDL program audit is planned for 2012, as soon as the district is able to fill the Chemist position. In addition, the SWD hopes to issue a statement to the TMDL program with comments regarding the 2010 DO Study audit and request a response from the program addressing what corrective actions were/will be taken.

Audit Activities

In addition to the required LEIs, another main goal for 2012 will be to conduct more observations of field sampling/testing procedures and technical assistance to inspectors during their inspections, as requested. The QA officer is a valuable resource which could be utilized by more staff in field inspections, (especially with respect to PAIs) and other program activities, particularly those of the Watershed program.