



2011 Annual Quality Assurance Report

Bureau of Water Facilities Regulation

**Wastewater Compliance Evaluation Section
Underground Injection Control Program
Drinking Water Section**

January 2012

Wastewater Compliance Evaluation Section

Executive Summary

The Wastewater Compliance Evaluation (WCE) Section in Tallahassee serves to facilitate statewide coordination of compliance and enforcement activities as well as promote better information management for the state's permitted domestic and industrial wastewater facilities. In fulfilling these roles, the section coordinates development and use of several wastewater information management systems. These systems are vital for tracking wastewater facility compliance and evaluating regulatory compliance for wastewater facilities on a statewide basis. These information systems include not only those specifically dedicated to tracking compliance and enforcement activities, but also those systems dedicated to maintaining an accurate inventory of wastewater facilities in the state. All chemical samples from wastewater facilities are required to be analyzed by a Florida Department of Health (FDOH) certified laboratory.

In 2011, the WCE Section made several efforts to improve the quality of data being entered into the state and federal databases. These improvements consisted of more in depth permit reviews during the permitting process, updates to the instructions for facilities submitting data and changes to how the data is entered into the databases.

WCE staff provided training on how to set up the data systems, properly submit data for entry into the data systems and enter data into the data systems. Audit processes were also implemented to ensure data systems were updated with valid facility information and to confirm that Discharge Monitoring Report (DMR) data was accurately entered. As a result of the training and audits, several issues were identified and corrective actions were developed and implemented to address those issues.

Report of Quality Assurance (QA) Activities and Issues

I. Training

a. Discharge Monitoring Report (DMR) Data Entry:

1. A presentation was developed and will be made available for permitted facilities that wish to submit data through the newly enhanced, electronic Discharge Monitoring Report (eDMR) system. *"eDMR - How to Get Started"* describes for the facilities how to properly submit DMRs electronically.
2. WCE staff also prepared presentations for the Florida Rural Water Association's (FRWA) annual *Focus on Change* workshops. These

presentations aimed at the permitted facilities, covered proper sampling techniques, how to fill out a DMR, and how to submit DMRs electronically.

3. WCE staff received Integrated Compliance Information System (ICIS) federal database and eDMR data entry training in order to maintain consistency.

b. Database/Facility Information Data Entry:

1. District staff was trained to update monitoring requirements in the Wastewater Facility Regulation (WAFR) database to ensure data accuracy and completeness. The monitoring requirements are used for data entry templates in the eDMR system.
2. District staff was trained to verify wastewater facility and site latitude/longitude locations using the Map Direct tool in the WAFR database.
3. WCE staff received training on how to search for FIESTA Managed Entities, WAFR Facilities and Affiliations before creating them in the WAFR database.

c. Whole Effluent Toxicity Review:

1. Provided training through video conference to District permitting and compliance and enforcement staff on how to review Whole Effluent Toxicity reports, including the quality assurance portions of those reports.
2. Prepared a guidance document entitled “Reviewing Whole Effluent Toxicity Correction Plans” for District staff and held a teleconference to discuss.

II. Audits

a. Database audits:

1. WCE staff worked with District staff to “clean up” the WAFR database to ensure that the requirements found in WAFR were consistent with those found in the corresponding facilities’ permits.
2. WCE staff worked with District staff to physically locate wastewater reuse sites via aerial photographs using the Map Direct tool in the WAFR database.

b. eDMR audits:

1. When facilities signed up to use eDMR and when facilities/staff reported problems while entering data into eDMR, WCE staff reviewed the data with the permit and the DMR to identify any problems and made the necessary data corrections as needed.
2. An Access database was developed to track the eDMR application and user activation processes to ensure efficiency and consistency throughout the processing of thousands of potential applications.

c. DMR audits:

1. **Quarterly E90 Report:** Once per quarter, staff runs a report to count the parameter exceedances in ICIS per facility for the past two years, along with the facility's total number of missing records. This high-level report provides a broad view of a facility's risk for appearing on EPA's Watch List.
2. **Outfalls Not Received Report:** Around the middle of each month, staff run a report to determine which DMRs were past due in ICIS from the previous three months and which DMRs have yet to be received or entered into ICIS. This report is sent to the District staff for follow up with the appropriate facilities.
3. **Weekly Report:** This report identifies exceedances and/or missing data for facilities whose data was entered into ICIS during the previous week. Data entry staff not only use this report to check their data entry, but also to follow up with the District staff in order to retrieve any missing data.
4. **E90s and Missing Data for eDMR:** At least once a month, a report is run to pull any exceedances and/or missing data from ICIS for eDMR submitters. This information is sent to the District staff for follow up with the appropriate facilities.
5. **Draft DMR Reviews:** When District staff prepares to issue a new or revised DMR, they typically send it to the Domestic, Industrial or WCE sections in Tallahassee. Staff reviews the DMR for ICIS compatibility and send comments back to the District office for consideration.

6. **Parameter and Limit Information in ICIS:** Each month, the WCE staff receives new and revised National Pollutant Discharge Elimination Systems (NPDES) permits and DMRs for entry and/or update in ICIS. A facility report is generated from ICIS in order to compare the permit information with the DMR requirements in order to confirm that everything matches. If corrections are needed, the changes are made in ICIS and another report is run after the data system updates to verify the corrections. In general, the following items are validated: issue and expiration dates, latitudes and longitudes, interim limits, receiving waters, etc.
7. **Quarterly Non-Compliance Report (QNCR) / Watch List DMR Review:** Each month, WCE staff review submittals from the Districts for the purpose of verifying that the data submissions resolve any facility issues.

III. Issues

- a. The monitoring requirements were not kept up to date in the WAFR database by District staff when there were permit renewals, permit revisions, administrative orders, or consent orders.
- b. Wastewater facility and site latitude and longitude locations that have not been verified.
- c. When District staff created Managed Entity or Affiliation records, they were not thoroughly searching the database and were inadvertently creating duplicate records.
- d. Erroneous data left in the WAFR database can cause an inaccurate fee to be assessed, incorrect person to be contacted, and returned invoices due to incomplete mailing addresses.
- e. Some water quality standards that are below the acceptable Method Detection Limits (MDLs) for reporting effluent monitoring results will need a system for identifying these parameters to avoid misinterpretation of the results.
- f. The Hydrosphere Bioassay Lab audit revealed that the Standard Reference Toxicant quality assurance charts were not prepared correctly.

IV. Corrective Actions

- a. WCE staff coordinates with the Districts to correct the monitoring requirements in the WAFR database.
- b. GIS analysts and District wastewater inspectors visit the wastewater facilities and sites to obtain and verify latitude and longitude information. WCE staff investigates and determines wastewater facility and site locations using the Map Direct tool in the WAFR database.
- c. The Clearinghouse process identifies duplicate records and informs the staff who created it to use the pre-existing record. Duplicate records are then marked for deletion.
- d. WCE staff work with the Districts and the regulated community to correct WAFR database information to re-generate invoices when necessary.
- e. Identify parameters where the MDL is expected to be below the permit limit, so instructions for reporting the results are included in the NPDES permits.
- f. Explained the error to Hydrosphere and worked to correct the charts as Hydrosphere performs whole effluent toxicity testing for many NPDES facilities throughout Florida.

Underground Injection Control Program

Executive Summary

The Underground Injection Control (UIC) Program regulates, for the purpose of protecting underground drinking water sources, the construction, operation, permitting, and closure of injection wells that place fluids underground for storage, disposal or remediation. UIC facilities are not only responsible for the collection of compliance water samples and on-site water quality measurements, but also for submitting this data to the UIC Program. All chemical samples from UIC facilities are required to be analyzed by FDOH certified laboratory.

The UIC Program, located in Tallahassee, is primarily responsible for managing the water quality data, which is stored in the Water Assurance Compliance System (WACS) database. The main quality assurance efforts for 2011 were evaluating data submittals

from UIC facilities for consistency with their permit conditions, identifying and eliminating erroneous data in the database, standardizing reporting, working towards electronic data entry, and updating locational and injection well data.

Report of QA Activities and Issues

I. Training

a. Technical Assistance:

1. The UIC Program provided technical assistance on a variety of quality assurance topics, including reporting issues and uniformity in reporting, to staff and other interested parties in support of the Department's programs. This included assistance provided by email, telephone and monthly teleconferences.
2. The UIC Program in Tallahassee trained their internal staff, District staff, and staff from other bureaus within the Department on data entry procedures, data retrieval methods and database facility creation.

b. DEP Quality Plans:

The UIC Program participated in the Standards and Assessment Section quality assurance coordination of the submittal and review of Quality Plans for various Department organizational units. These plans formalize the procedures and criteria utilized by the work units in carrying out their quality assurance responsibilities under the Department's Quality Assurance Directive 972. The UIC Program submitted their QA Project Plan dated September 14, 2009.

II. Audits

a. Data Audits:

1. UIC staff continues to evaluate the data in the database to identify and correct problems that occurred when the Groundwater Management System (GMS) was converted to WACS. In some cases, monitoring data or sampling locations (testsites) from non-UIC facilities were incorrectly transferred to the UIC testsites. Erroneous data are removed from the testsite and if the correct testsite can be identified, the data are transferred.
2. The UIC Program created reports to audit new data entries into the database for consistency and completeness. These reports were needed as District staff now create facilities in WACS and often

leave out key information. When duplicate data and inventory entry issues are identified, instructions are created and dispersed to staff to aid with consistent and accurate data and inventory information.

3. UIC staff continues to check and verify the units of measurement for data received and indentify questionable data. Issues or questions on the units or data are brought to District staff and permittees for clarification, correction and/or possible enforcement.
4. UIC staff is currently reviewing all UIC wells and facilities in the database to make sure they all have updated locational data.

b. Project Audits:

1. The UIC Program generates work products in the form of graphs, spread sheets, reports, and other documents that incorporate various data for each facility. These reports are used to check for data consistency, suspected erroneous data and data trends.
2. Staff continues to review all sampling data submittals for inconsistencies, missing data, erroneous data, questionable data, and data trends. If data issues are identified, the District staff and permittees are notified accordingly for clarification and correction.
3. Monitoring reports and permits are checked and compared to the requirements in the WACS database to determine if any changes are needed before the current data are entered.

III. Issues

The main issue affecting quality assurance in the UIC Program is the lack of a standard format for the facilities to submit their monitoring result data. Currently, no report is the same from facility to facility and sometimes it even changes from month to month for the same facility. This is problematic when entering data.

IV. Corrective Actions

As part of the long-term goal to further develop instructional resources for Department staff and external stakeholders, the UIC Program plans to create and revise training documents, guidance and other materials to ensure consistency in UIC data management and quality assurance. Other goals include working towards standardized reporting formats, investigating possibilities of electronic reporting and developing additional information

inventories and reports. The UIC Program is making a strong effort to standardize reporting forms. During 2011, staff researched different options for the automatic uploading of data electronically into the database. This effort will continue throughout 2012.

Drinking Water Section

Executive Summary

The Drinking Water Section located in Tallahassee is responsible for writing rules, developing policy, managing funds, providing training, data management, and managing special initiatives as well as oversight of all the state-wide public water system data. Drinking Water Section staff also resolves any database compliance issues and provides data entry technical support to the six District offices and the nine approved county public health units. All chemical samples from drinking water facilities are required to be analyzed by a FDOH certified laboratory. Over the course of 2011, the section participated in some training workshops and oversaw several audit activities.

Report of QA Activities and Issues

I. Training

- a. In 2011, the Drinking Water Section staff participated in the Department's Laboratories QA Officer training held in Tallahassee.
- b. Staff also prepared presentations for the FRWA annual *Focus on Change* workshops. These presentations covered several rule updates, such as the Long Term 2 Surface Water Treatments rule, Lead and Copper Short Term revisions, Stage 2 Disinfection Byproducts, and the Groundwater rule.

II. Audits

- a. **Annual Audits for Public Information:** Public water system information, chemical, bacteriological and other data files are verified for accuracy to ensure reliability before posting to the drinking water website for public consumption. Additionally, 11 of the 15 field offices received a comprehensive evaluation of their program, including a review of their files and compliance activities.
- b. **Routine Audits for Data Accuracy:** Drinking Water Section staff routinely (quarterly and sometimes even daily) assesses data entry results

and notifies the various offices of any questionable results or possible data entry problems within the Potable Water System (PWS) database.

- c. **Technical Assistance:** Staff provided technical assistance on a variety of quality assurance topics to program staff and other interested parties. This included assistance provided by email, telephone, presentations at meetings, and teleconferences.

III. Issues

- a. **Consistent Use of Data Qualifiers:** District Drinking Water staff routinely receives data that is qualified by certified labs for any number of reasons. One of the challenges facing quality assurance is consistency by the labs in regards to qualifying data and the correct interpretation by the field offices when data is submitted.
- b. **New Federal Drinking Water Rules and Methods:** Other challenges include implementing new EPA federal rules requiring specific methods to be used for sample processing and making sure the laboratories are aware of these new changes in order for the results to be useable.

IV. Corrective Actions

The Drinking Water Section intends to accomplish the following quality assurance projects in the 2012 calendar year.

- a. **Audits and Audit Reports:** The Drinking Water Section is proposing to initiate a self-verification data quality assurance audit for all district offices and approved county public health units in 2012. This effort will include the existing annual program evaluation of each field office (mentioned in section II. a. above) to improve data entry procedures and increase data accuracy.
- b. **Training:** As a refresher for District staff, several webinars are being planned that will focus on data entry and proper compliance procedures.