September 15, 2011

Office of Water Quality Water-Quality Information Note 2011.06

Subject: Changes in the Reston Chlorofluorocarbon Lab Processes for Data Transmittal to Customers

Purpose: The purpose of this Water-Quality Information Note (WaQI Note) is to describe the past data release processes used by the Reston Chlorofluorocarbon laboratory (CFC lab), provide instructions on how to obtain CFC lab data currently in QWDX (https://qwdx.cr.usgs.gov/), describe a change in the laboratory's process for uploading data to QWDX, and provide guidance on storing CFC lab data in QWDATA. The CFC lab currently uploads results for CFCs, SF_6, and five dissolved gasses (N_2, AR, CO_2, CH_4, and O_2) to QWDX.

Problem addressed by this WaQI Note: Water-quality data from the Reston CFC Laboratory are not being consistently stored in NWIS, limiting availability of the data to users beyond those collecting the data. Data may be missing because previously-released data may have been rejected by QWDATA and errors were not resolved. Some CFC data releases have not yet been downloaded from QWDX and loaded into QWDATA.

Background: CFC lab users are required to send a sample submission spreadsheet with an itemized list of the sample bottles collected for each sampling event. Some constituents such as CFCs require two or more bottles per set. All of these samples are considered environmental samples and all results should be coded with an environmental medium code. The CFC lab analyzes the set of samples and prepares a spreadsheet with detailed results and creates QWDATA batch files. The CFC lab uses the dates and times written on the bottles when preparing batch files. However, if the multiple bottle sets collected at the same site have the same time written on each bottle, the CFC lab will add a time offset to the second and subsequent multiple samples in that set so that the dates and times are unique and can be stored properly in QWDATA. The batch files are uploaded to QWDX.

The spreadsheet with detailed groundwater age results is sent to the project chief via email. In March 2009, the Reston CFC lab began using QWDX to transmit some analytical results to their customers, in addition to the spreadsheet and explanatory email. Samples and results were uploaded to QWDX and identified as "Reload" data. The email from the CFC lab included instructions for reviewing the data and how to download the samples and results from QWDX. However, much of the data from the CFC laboratory were belatedly downloaded, and some were never downloaded from QWDX because the data were unexpectedly identified as "reload" data.

Solutions:

- Project personnel who received email from the CFC lab should contact their NWIS QWDATA DBA and verify that the transmitted results are stored in QWDATA. If data are missing, correct rejected batch files and reprocess in QWDATA.
- NWIS DBAs for customer codes FL5, MD, SD, VA, and WV should retrieve untransmitted "reload" data from the CFC lab and work with the project personnel on loading the results in QWDATA.

- Beginning on Monday, October 3, 2011 the Reston CFC lab will no longer treat their data as "reload" data and will upload data to QWDX using the normal laboratory upload setting. This change will allow the use of cron processes to find and download the data, if the WSC wishes to do so.

- If the WSC wishes to use the cron process to download data from the CFC lab and wishes to process it into QWDATA using **different** batch processing instructions than those that are used for other laboratory data, then the existing cron process should be edited to process the CFC lab separately.
    - From the QWDX main menu, select "Update (or Setup) your Automated Download cron job". Follow the instructions on how to edit the automated downloads. More detailed instructions are included in the "get_qwdxdata" script itself.
    - Create a custom "push" option for the CFC lab (source code = USGSCFVA) and specify the desired options. Be sure that the CFC lab instructions are listed before the general laboratory push instructions.
        - This example will update existing laboratory data or create new sample records (be sure to change "XX" to your customer code(s). Samples do not have to be logged in prior to loading the data.

```
push (@Tasks,
       'XX',                        # Single, or underscore-delimited
list of Customer Codes
       ' USGSCFVA '   ,             # single, or underscore-delimited
list of, Source Codes (LABs), or "all".
       '01',                        # One, Single DB Number to load the
data into (NO multiples like '01','02')
       'any',                       # qwgetlab Transaction Type for
loading (usually "update_only" for LAB data)
       'lab_data',                  # qwgetlab Data Type (must be either
"field_data" or "lab_data")
       "$BatchHome/archive/loads", # directory to place WATLIST files
(can use $BatchHome, or your own dir.)
       ''                           # custom alert limit file list.
(either empty, 'all', or 'xx,yy,etc.'
       );
```

- Users should write a unique sample time on each sample bottle that is submitted for analysis after October 3, 2011. This will allow the user full control over what times are assigned to each sample in QWDATA.

Please contact the Reston CFC lab (cfc@usgs.gov) for help with preparations for sampling, and contact GS-W Help QWDX for help with QWDX.

If this Note was forwarded to you and you'd like to have your name placed on the WaQI Notes distribution, please send email to nlsnow@usgs.gov.

WaQI Notes are archived on the Office of Water Quality web site, http://water.usgs.gov/usgs/owq/WaQI/index.html

Signed,

The Office of Water Quality
9/15/11

Distribution: All WRD Employees