Georgia Department of Natural Resources
Environmental Protection Division Laboratory

Laboratory Manager Approval: *Mary K. Bowman* / 08/19/2021

QA Manager Approval: *Jeffrey Moone* / 08/19/2021

Procedure for Results Entry in the Bacteriology Laboratory

Access to this SOP shall be available within the laboratory for reference purposes; the official copy of this SOP resides on the official Georgia EPD website at https://epd.georgia.gov/about-us/epd-laboratory-operations. Printed copies of this SOP will contain a watermark indicating the copy is an uncontrolled copy.

1   Scope and Application

In the Bacteriology Laboratory, raw data is manually entered into the LIMS by Laboratory staff that has been properly trained in LIMS operation and has been given specific LIMS privileges. The LIMS in operation at the EPD Laboratory is Perkin Elmer Labworks Enterprise ES Desktop. All data stored in the LIMS is maintained in an Oracle database. The Bacteriological Laboratory has a database separate from that of Chemistry.

2   Definitions

Refer to Section 3 and Section 4 of the Georgia EPD Laboratory Quality Assurance Manual for Quality Control Definitions (See SOP reference 5.1).

3   Quality Control

Refer to Section 13 – LIMS Operation of the Georgia EPD Laboratory Quality Assurance Manual (See SOP reference 5.1).

4   Procedure

4.1   Results Entry for Bac-t Samples (Drinking Water)

4.1.1   Results Entry begins with the laboratory staff member logging onto the network using their secure network username ID and unique password.

4.1.2   Click on the Labworks Desktop Icon.

4.1.3   Select BACT as the Database for Login.
The Labworks user must enter their initials and their Labworks password. Click "OK."

4.1.4   The Labworks Desktop screen appears. Click "Results", select Results Entry. Alternatively, you may select the Desktop Icon for Results, if you have one.

4.1.5   The Labworks Results Entry Screen appears.

4.1.6   First, go to the Results Entry Available Template and select "Results".

4.1.7   Under Search for Samples, select "Sample Run".

4.1.8   Type in the batch name or click on the desired sample run.

4.1.9   Click "View Selections"

4.1.10   Click "Enter Selections".

4.1.11   The actual Result Entry screen appears for the designated sample run.

4.1.12   Enter the results for the Blank (B-TCOL, Negative sterility) and the Positive control (LRTCOL).

4.1.13   Enter the Analyst's initials (person reading the run), Analysis Start Date, Analysis Start Time, Analysis End Date and Analysis End Time for each sample.

4.1.14   Then proceed to enter the results under the correct analysis (ex: TCOL, FCOL, TCOL-LTP etc.)

4.1.15   If the analysis has not been added, right click on the gray field for the desired test code and number. Click "Add analysis to the sample". "Are you sure you want to add analysis to sample?" click "Yes".

4.1.16   Once all results have been entered and **checked for accuracy**, then click "Save".

4.1.17   Under Lab BacT Reports click "Check Sample Info".

4.1.18   Select sample run and check next to batch name. Click "View Selections" then "Enter Selections".

4.1.19   Scan the document for any text that displays red.

4.1.20   Any red items make the necessary modifications.

4.1.21   Repeat "Check Sample Info" until all text in document is black.

4.1.22   Exit.

4.2   <u>To enter all Negative results:</u>

4.2.1   Refer to 4.1.1-4.1.13 above.

4.2.2   Right click on TCOL result Column.

4.2.3   Select –"Fill pending single comp results for test TCOL".

4.2.4   Then select "Negative" from the Available Analysis Result List.

4.2.5   Click "OK".

4.2.6   All sample results should have been automatically filled in with a negative result and the sample analysis information as the first sample. **Note:** If any analysis information is different from the first sample, ex: start time, make sure to correct this information for the affected samples.

4.2.7   Save Results.

4.2.8   Exit.

4.3   <u>To Enter Results for a single sample or just a few:</u>

4.3.1   Refer to 4.1.1 - 4.1.6 above.

4.3.2   Under Selection Criteria, select "Sample ID".

4.3.3   Enter the appropriate lab number(s) in the space provided. **Note:** For more than one sample, type the lab number and hit enter.

4.3.4   Click View Selections.

4.3.5   Enter Selections.

4.3.6   Enter results. (Steps 4.1.12 – 4.1.15 above)

4.3.7   Once all results have been entered and **checked for accuracy**, then click "Save".

4.3.8   Exit.

4.3.9   <u>To Enter Comments for "Invalid" and "Not Analyzed" Samples</u>

4.3.10   Refer to 4.3.1 to 4.3.6

4.3.11   In the result entry screen under User Info click Sample Number

4.3.12   Click Comment

4.3.13   Enter in the comment box an explanation from the list below: i.e. Invalid Sample - Chlorine reported. Not Analyzed – Customer's request. **Note: Chlorine reported should be used for source or well samples only**. Invalid Samples – explanations

1. Chlorine reported (source/well samples only)
2. Incorrect bottle
3. Inclement weather
4. Ice in sample
5. Insect in sample
6. Debris in sample
7. Contamination at collection

Not Analyzed – explanations

1. Customer's request

4.3.14   Click Save

4.3.15   Exit

4.4   <u>To Batch Stream/Wastewater Samples</u>

4.4.1   Begin with the laboratory staff member logging onto the Network.

4.4.2   Click on the Labworks Desktop Icon.

4.4.3   Select Chem as the Database for Login. The Labworks user must enter initials and the Labworks password. Click "OK".

4.4.4   From the Labworks Desktop screen, go the QA/QC pull-down menu and click "QA/QC Batching." Click on the "Specify new batches by analysis" icon.

4.4.5   Pick QA test screen appears. Under analysis available for batching look for FCOL or type in box. Click on FCOL and click "OK".

4.4.6   Batch Selection screen appears. Under the FCOL column uncheck Batch and then for each sample you are reporting check the Pending box.

4.4.7   Batch Size Specification Screen appears. Under Batch Size type in the total number samples in your batch.

4.4.8   Batch QA Sample Specification screen **appears. Add Quality Control Tests to batch by:**

      a. Click drop box next to <u>QA Group Added</u> and click #QTCOL (QA tests added should immediately show the number "2" in the box).

      b. Click on the first sample number of the batch (Sample # 1) to assign QC.

      c. Then click the number "2" under <u>QA Test Added </u>to verify that the QA/QC samples were added. B_EC-MPN and LSEC-MPN boxes should be checked. Click "OK".

4.4.8   Click "OK". "1 new QA/QC Batch successfully created" appears. Then click "OK" again.

4.4.10   Exit.

 4.5   <u>To Print Worksheet</u>

4.5.1   Click on the "Print worksheets for QA Batch" icon from the Labworks QA Analysis Batching screen.

4.5.2   Under available worksheet formats, choose Streams.

4.5.3   Click newest QA/QC Batches.

4.5.4   Click "Find Batches".

4.5.5   Click "OK".

4.5.6   A worksheet is then generated identifying the batch and allowing results to be properly recorded.

4.5.7   Exit.

4.6   <u>Results Entry for Stream/Wastewater Samples</u>

4.6.1   The Labworks Desktop screen appears. Click "Results", select Results Entry. Alternatively, you may select the Desktop Icon for Results, if you have one.

4.6.2   The Labworks Spreadsheet Results Entry Screen appears.

4.6.3   First, go to the Results Entry Available Template and select "BACTI."

4.6.4   Under search for samples, select Cross Reference Search.

4.6.5   Under available cross reference search routines type in VALFCOL. Double click on highlighted VALFCOL. Enter the submittal dates and click "OK".

4.6.6   Click View Selections.

4.6.7   Click Enter Selections

4.6.8   Locate the desired stream number and enter the stream results under the correct analysis.

4.6.9 Enter Analyst's initials (person who ran the sample), Start Time and Start Date. Enter Qualifier if applicable.

      Note: For "Too Old" samples, use the initials of the analyst who is entering the results and use the default time/date

4.6.10   To add duplicate and mean results, right click on the gray field for the desired test code and number. Click "Add analysis to the sample". "Are

you sure you want to add analysis to sample?" - click "Yes". After you enter the original and duplicate results the mean result will calculate, populate that field and round to the even.

4.6.11   After completion of results entry, click "**Save**" to save all result information.

4.6.12   Exit.

4   References

5.1   GA EPD Laboratory Quality Assurance Plan, online revision.

SOP Updates to Previous Version:
   Updated to online revision.