

Appendix 6: Data review checklists and methods

Field data review checklist and review steps

Lab data review checklist and review steps

Warehouse checklist and review steps

AMS Field Data Review Checklist

Time Period of Data: _____ to _____

Review Monthly Spreadsheets

Combine Spreadsheets to One File

File: _____

Field Cleaner

Table: _____ # of rows: _____

Notes: _____

Data Stacked in JMP

Notes: _____

File (txt): _____

yyyyDataQA.accdb

Table: _____ # of records: _____

Duplicates Results without Depth

Crosstab Query:

_____ 10

_____ 300

_____ other: _____

Duplicates for Results

Minimum of Date/Time Table: _____

Total # of Sampling Events: _____

Range of Results

Null Values

Comments Field

Results by Station

Random Sample Set- hard copy review

_____ % of Data, _____ # of Sampling Events, _____ # of Data Reviewed

Files (txt): _____

Non-recorded: _____ No Hard Copy: _____ Non-Matching: _____

Notes: _____

of Records: _____

Other Comments: _____

Review Completed Date: _____ by: _____

AMS Field Data Review and Finalization

Field data are entered by regional monitors into a regional monthly field data spreadsheet saved as yyyy_mm rRO.xls. Regional spreadsheets are reviewed when received and identified concerns (such as values out of range or missing values) are sent back to the monitors for review and revision if necessary. This review process pulls the regional monthly spreadsheets together and includes a more thorough review and check of the data.

Monthly Spreadsheets

(C:\AMS Everything Useful\Shared_AMS\Monthly AMS data summaries\yyyy)

Combine regional sheets into one excel file per month. Save file as **yyyy_mm.xls**.

Review monthly spreadsheet columns for missing data, typing errors, and miskeys.

Common errors:

Date: Not within time period or missing; format: **yyyymmdd**

Time: Odd times such as early morning and late night or missing; format: **hhmm**

Depth: Very high numbers or missing

Results: Out of normal range for parameter

Collector: Missing or wrong format (lastname firstinitial\lastname firstinitial)

Make changes or add missing data. This may require contacting monitors so they can check their records. Also if you have received the corresponding lab sheets some data may be on them.

Save file.

Combine monthly spreadsheets for time period reviewing usually by quarter or 4 month interval. Review quarterly spreadsheet again to make sure no data are missing.

Save file as **yyyy_month-month_Field.txt**. (ex. 2011_Jan-Apr_Field.txt)

Field Cleaner

(C:\AMS Everything Useful\ Data Review)

Import txt file into **FieldCleanerB.accdb**

When importing change date/time fields to text fields and parameter fields to number-double. You will want Access to add a primary key (autonumber).

Name imported data table- **tblyyyy_month-month_Field**

Once imported review table especially check date/time fields for correct format.

Delete all RAMS Visit IDs (begin with R instead of V) from table

Append recent Visit IDs to **tblCurrentVID** with **qappVisitIDsToCurrentVID**.

Open **qappVisitIDsToCurrentVID** in design view.

Change the criteria to the month(s) and year associated with the Visit IDs to be added.

!Run Query. (Note: *tblVisitID* is linked from the *Labsheet* database)

Open table **tblToBeCleaned**- Clear old data by highlighting all rows and selecting delete records.

Append new field data to **tblToBeCleaned**

Open design view of append query- **qappAddTotblToBeCleaned**.

Add new table to query- Query Tools> Design Tab> Show Table.

Change Table source in query fields to new table and then remove old table from query.

****Make sure you have changed all applicable columns or you may end up losing a column when you remove the old table.**

!Run query- should say appending ## of rows

Check table **tblToBeCleaned** to make sure all data were included and no columns were lost.

!Run macros mcrRunErrorChecks- enter start date, end date for time period of field data being reviewed.

Check table **tblErrors**.

Go through table to verify or change errors generated by macros.

Main errors will be: Mismatch VID, Duplicate VID, Bad date/time, Duplicate Record, and Null Header Info.

Append records back to main table by running- **qappFixedErrorsToMainTable**.

Rerun **mcrRunErrorChecks** until satisfied that no more changes need to be made.

Append records back to main table each time after checking errors.

Stacking Data in JMP

(C:\AMS Everything Useful\ Data Review)

Open JMP.

Open Stack Field Data Script- **StackFieldDataRev.JSL**

You will be asked to select which table to open –select **tblToBeCleaned**.

Check the final table that pops up especially the date/time field.

Save file as **yyyyField_month-month.txt**. (ex. 2011Field_Jan-Apr.txt)

*****The SQL StackFieldDataRev should stack the field data for you but if not here are the directions.***

Open JMP

Open Database Table- Connect to Access- find FieldCleanerB.accdb/**tblToBeCleaned**

Check imported data especially dtmdatetime for blanks. Delete extra date/time fields.

Stack Tables

Table>Stack

Without depth- stack columns= 20, 32, 35, 36, 45, 78, 1351

Stacked Data column= result

Source Label column= methodcode

Click **Stack**

Delete other method code columns

Table>Stack

With Depth- stack columns= 10, 94, 300, 400, 480

Stacked Data Column= result

Source Label Column= methodcode

Click **Stack**

Delete other method code columns

Concatenate Results tables

Tables>Concatenate

Place both of the newly created tables into selected data table

Click **Concatenate**

Check newly created table with both “without depth” and “with depth”.

Tables>Summary

Group by results, statistics by N

Select rows with “.” in result

Delete selected rows from concatenated table.

Save joined table as **yyyyField_month-month.txt**. (ex. 2011Field_Jan-Apr.txt)

****This completes JMP process.**

Open text file in Excel to check for “.” in fields- Depth, Comments, Collector, etc. This also keeps time in 24hr format when imported into Access.

Save file.

Data QA

(C:\AMS Everything Useful\ Data Review\yyyy\yyyyDataQA.accdb)

Import saved text file (**yyyyField_month-month.txt**) into database.

Change the following fields to the listed data type: Date/Time- text, result/depth- double, methodcode- long integer

Have Access add a primary key (autonumber).

Name imported data table- **tblyyyyField_month-month**. (ex. tbl2011Field_Jan-Apr)

Once imported review table especially check date/time fields for correct format.

Add a field for Month (strMonth) to the table. Save Table.

Import updated **tblCurrentVID** from FieldCleanerB.mdb into database.

Update the month column in data table through an update query using **tblCurrentVID-qupMonthToData**

Check for duplicate Results without Depth

Create a find duplicates query that looks for duplicate visit ID, methodcode.

Review duplicates- this will be for rows with depth.

Change criteria in depth field to “is null” to check data without a depth.

Review duplicates. Make changes if necessary and delete duplicate rows due to depth profiles.

Make Crosstab Query

Row Heading- Station, Methodcode

Column Heading- Month

Count(result)

!Run query

Change criteria in query to run for individual method codes

Such as 300- Dissolved Oxygen

10- Water Temperature

Check each query to see if the correct number of results show up for each month. If there are discrepancies then verify there is no result for that station that month. Update missing or incorrect entries.

Check for duplicate Results

Create a find duplicates query that looks for duplicate visit ID, methodcode or duplicate visit ID, methodcode, depth, or duplicate visit ID, methodcode, depth, result.
Review and make necessary changes.

Minimum of DateTime field

Create a query with Visit ID, station and dtmDateTime(min).

Change query type to make-table query

Name table- **tblField_month-month_MinDT**

!Run Query- will ask if you want to append to new table- click **yes**.

Update DateTime to Minimum DateTime

Make a backup copy of field data table- save as **tblyyyyField_month-month_Copy**.

Create an update query with table **tblField_month-month_MinDT** and Field data table **tblField_month-month**. Relate tables by strVisitID.

Use DateTime field from Field data- update to minOfdtmDateTime field.

!Run query

Check Range of Result values- (This is done in basic check of monthly spreadsheets but another look does not hurt.)

Create a query with max, min and count of results for each method code

Columns- methodcode, displayname, result(count), result(min), result(max)

Look for appropriate ranges of data, i.e. at or above detection limits, decimal places

Check for null values

Create a query with each column in the results table included. In the criteria start on the first line for the first column and type "is null". Continue this for the other columns except the comments and depth fields but go down one line each time. This should let you know if something is missing.

Check Comments field

Review comments- remove any unnecessary comments that should not carry on with the data.

Convert "LDO" to "Luminescence based DO sensor" for dissolved oxygen readings.

Compare Results by Station to previous 5 years of data

Create a min, max, count table for each station by methodcode based off the historical data (last 5 or so years). (current table **tblStationDataRanges_2006-2010**)

Compare min/max to new data.

Open design view of **qryCompareResultsToMinMaxField**

Add new data table (**tblField_month-month**) to query and change Table source to new table -then remove old table from query.

Create relationships between tables to include stationcode=strStation and methodcode=methodcode.

!Run Query

Review results that have a “!!!” in either the min or max column against the spreadsheets to check for typo’s. Correct typo’s and check spreadsheets or with monitors for other outrageous results that don’t seem reasonable.

Random Sample Set- compare against field data hard copies

Open the table **tblyyyyField_month-month** in JMP

Tables> Summary
Group by VisitID, station, datetime, collector
Statistics- blank

Create a random subset from the summary table
Tables>Subset>Random sampling rate- enter a % (eg 0.05). Percentage will depend on number of results and feasibility to review. Click- Link to original data table.
Save subset table as **Subset of ‘tblyyyyField_month-month’ RandomReview.txt**

Select all records in the subset table. Go back to the original table **tblyyyyField_month-month** in JMP and create a subset table from the selected rows.
Tables>Subset>Selected rows
Click- Link to original data table.
Save subset table as **Subset of ‘tblyyyyField_month-month’ RandomReviewData.txt**.
This table will include the individual data points related to the first random subset table.

Split the data from the selected rows subset table for reviewing convenience.
Tables>Split
Split columns- result
Split label column- methodcode
Group by- strVisitID, strStation, dtmDateTime, dblDepth
Check “Keep all remaining columns”
Click **Ok**.
Rearrange order of methodcodes to match field data spreadsheet.
- 94, 10, 300, 400, 20, 480, 45, 32, 36, 1351, 35, 78
Save as **Subset of ‘tblyyyyField_month-month’ RandomReviewData_Split.txt**
Open table in Excel and format for review purposes.

Open file **Subset of ‘tblyyyyField_month-month’ RandomReview.txt** in Excel.
Sort sampling events by regional office and format table.
Save file as **Subset of tblyyyyField_month-month_#.xls**. (ex. Subset of tbl2011Field_Jan-Apr_60.xls)
Send email to regional office monitors and request copies of the original hard copies for the selected sampling events.

Review field data hard copies against file **Subset of ‘tblyyyyField_month-month’ RandomReviewData_Split.txt**. Note any values that were not recorded on the hard copy but appear in the electronic version, no original hard copy could be found, and those where the hard copy version does not match the electronic version.

Remove values that were not recorded on the hard copy or no hard copy is available. Revise values to hard copy versions for those that do not match.

AMS Lab Results Review Checklist

Time Period of Data: _____ to _____

Review Key Station Data
File: _____

Lab Cleaner
Table: _____ # of rows: _____
Notes: _____

Data Stacked in JMP
_____ (stacked) - _____ (blank) = _____ Records
Notes: _____
File (txt): _____

yyyyDataQA.accdb
Table: _____ # of records: _____

Crosstab Query: _____ 82079
 _____ 610
 _____ 530/1040
 _____ other: _____

Duplicates for Visit IDs, DateTime

Duplicates for Results

Null Values

Remark Codes

Comments Field

Range of Results

Results by Station

Random Sample Set _____ % of Data

Other table/query names: _____

of records: _____

Other Comments: _____

Reviewed Completed Date: _____ by: _____

AMS Lab Results Review and Finalization

Lab data from hard copy lab reports are entered by the ESS Processing Assistant into an Access database (R:\Key Station\Data Entry_20100611.mdb). Data are pulled from the database and saved on the ESS server (R:\Key Station\Data Entry Backups\Key Station_yyyymmdd.xls) and AMS Coordinator's computer (C:\AMS-Everything Useful\Key_Station_Data\DATAENTRYthruyyyymmdd.xlsx). Revised versions of the data pulls are saved with rev at the end of the file name (DATAENTRYthruyyyymmddrev.xlsx).

Key Station Data

(C:\AMS-Everything Useful\Key_Station_Data)

Review columns for missing data, typing errors and miskeys.

Common errors:

- Visit ID: Missing V or wrong number of digits, other fields entered
- Station Numbers: wrong amount of digits, other fields entered
- Lab Numbers: extra digits, other fields entered
- Date: not within time period, no date*, format: yyyymmdd
- Time: Odd times such as early morning and late night, no time; format: hhmm
- Depth: Very high numbers, no depth
- Results: Out of normal range for parameter or letters entered
- Remarks: Numbers instead of letters or remarks codes that don't exist

Make changes based on lab sheets. Contact Chemistry Lab for odd values or qualifiers.

Review lab data by station to check that all lab sheets for the time have been entered. This will be checked again later in the review process but a check here will reduce having to repeat the process and ensure all data have been received and entered.

Need to change date field format in Excel. Do this by adding an extra column and making the original column a text column. Format the new column as - =mid(cell,5,2)&"/"&right(cell,2)&"/"&left(cell,4). Copy this column then paste special as values. Delete extra column.

Save file as **yyyy_month-month_Lab.txt** (ex. 2011_Jan-Apr_Lab.txt) in C:\AMS-Everything Useful\Data Review\yyyy Data Review.

Lab Cleaner

(C:\AMS Everything Useful\ Data Review)

Import file into **LabCleaner.accdb**-

When importing change all parameters to double and do not have Access add a primary key.

Name imported data table- **tblyyyy_month-month_Lab**.

Once imported review table especially check date/time fields for correct format. Field types should match fields in **LabDataTBC**

Delete old table **tblCurrentVID**.

Import updated table **tblCurrentVID** from FieldCleaner.mdb

Open table **LabDataTBC**. Delete all records.

Append new lab data to **LabDataTBC**

Open design view of append query- **addtoLabDataTBC**.

Add new table to query- Query Tools> Design Tab> Show Table

Change Table source to new table and then remove old table.

****Make sure you changed all applicable columns or you may end up losing a column when you remove the old table.**

!Run query- should say appending ## of rows

Check table **LabDataTBC** to make sure all data were included and no columns were lost.

!Run macros mcrRunLabErrorChecks- enter start date, end date for time period of lab data being reviewed.

Check table **LabDataErrors**.

Go through table to verify or change errors generated by macros.

Most errors will be Null header info, Bad date/time, Duplicate Lab #, Unknown VID, Mismatch VID.

Append records back to main table by running- **qappFixedLabErrorstoMainTable**.

Rerun **mcrRunLabErrorChecks** till satisfied that no changes need to be made.

Append records back to main table each time after checking errors.

Stacking Data in JMP

Open JMP

Open Database Table- Connect to Access- find LabCleaner.accdb/**LabDataTBC**

Check imported data table. Delete extra "Date" and "Time" Fields.

Stack Tables

Results

Table>Stack

Stack Columns= methodcode (highlight all method codes by holding Ctrl and clicking on each method code column)

Stacked Data column= results

Source Label column= methodcode

Output Table name: Results

Click **Stack**

Delete remark columns from new table

Remarks

Table>Stack

Stack Columns= methodcode rmk (highlight all method codes rmk by holding Ctrl and clicking on each method codes rmk column)

Stacked Data Column= remark

Source Label Column= methodcode

Output Table name: Remarks

Click **Stack**

Delete result columns from new table

Find/Replace to remove rmk from method codes in methodcode column

Join Remarks and Results tables

Check both tables for same # of rows

Tables>Join

Join Results with Remarks

By matching columns- Match Visit ID, Station, Lab Numb, DateTime, depth, methodcode

Check **Include non-matches** from both tables

Select Output columns- from Results: Station, Visit ID, DateTime, Lab Numb, Depth, Comments, Methodcode, Results, and From Remarks: Remarks.

Output Table name: JoinedResultsRemarks

Check # of rows in joined table, it should match the # in the separated tables.

Tables>Summary

Group by results, remark

Select rows with “.” in result and “ “ in remark

Delete selected rows from joined table

Save joined table as **yyyyLab_month-month.txt** (ex. 2011Lab_Jan-Apr.txt).

Open file into Excel in order to delete remaining “.” values and check depth values.

Save file. This keeps 24hr format for time field.

Data QA

(C:\AMS Everything Useful\ Data Review\yyyy\yyyyData QA.accdb)

Import saved text file (**yyyyLab_month-month.txt**) into database.

Change the following fields: DateTime- text and result - double number

No Primary Key is necessary.

Name imported data table- **tblyyyyLab_month-month** (ex. tbl2011Lab_Jan-Apr)

Review imported table for correct number of records and format.

Add a field for Month to the table. Save table.

Update the month column in data table through the update query, **qupMonthToData**, using tblCurrentVID.

Make Crosstab Query

Row Heading- Station, Methodcode

Column Heading- Month

Count(Results)

!Run query

Change criteria in query to run for individual method codes

Such as 82079- Turbidity

610- Nitrogen NH3

1040- Dissolved Copper

80- Color

Check each query to see if the correct number of results show up for each month. If there are discrepancies then verify there is no result for that station that month. Update missing or incorrect entries.

Find Duplicate Visit ID, DateTime

Create a query with Station, Visit ID, datetime. Set Properties for Unique Values to yes. Save query as **qryyyyyyLab_month-month_Unique**.

Create a find duplicates query based off the just saved query.

Check for duplicate Visit ID's with different datetime, same station duplicate datetime with different Visit ID's, etc...

Correct mistakes so that each Visit ID is associated with the correct station for one datetime.

Check for duplicate Results

Create a find duplicates query that looks for duplicate visit ID and methodcode.

Check for null values

Create a query with each column in the results table included. In the criteria start on the first line for the first column and type "is null". Continue this for the other columns except the remarks and comments fields but go down one line each time. This should let you know if something is missing.

Check Remark Codes

Make sure remark codes are valid and look over format for uniformity.

Convert pH text for methodcode 83 from "PH-" to "SAMPLE PH=".

Check Comments field

Move additional analysis such as 310(BOD) into stacked format. Create a new line and copy station information, add methodcode and result. Delete information from comment field.

Also review comments- remove any unnecessary comments that should not carry on with the data.

Check Range of Result values

Create a query with max, min and count of results for each method code

Columns- methodcode, displayname, result(count), result(min), result(max)

Look for appropriate ranges of data, i.e. at or above detection limits, decimal places

Check Results by Station to previous 5 years of data

Create a min, max, count table for each station by methodcode based off the historical data (last 5 or so years). (current table: tblStationDataRanges_2006-2010)

Compare min/max to new data.

Open design view of **qryCompareResultsToMinMaxLab**

Add new data table (**tblyyyyLab_month-month**) to query and change Table source to new table -then remove old table from query.

Create relationships between tables to include stationcode=strStation and methodcode=methodcode.

!Run query.

Review results that have a "!!!" in either the min or max column against the lab sheets to check for typo's. Correct typo's and check with lab for other outrageous results that don't seem reasonable.

Random Sample Set

Open the results table (**tblyyyyLab_month-month**) in JMP

Table>Subset>Random sample- pick a % (eg 0.05 or 0.025). Percentage will depend on number of results and feasibility to review.

Save new table as a txt file- **Subset of 'tblyyyyLab_month-month'.txt**. (ex. Subset of 'tbl2011Lab_Jan-Apr'.txt)

Open txt file in Excel and print.

Check results against hard copy lab reports to make sure database matches the lab reports.

Correct any changes.

AMS Field and Lab Data into Results Database Checklist

Time Period of Data: _____ to _____

Field Data Table: _____ # of records: _____

Lab Data Table: _____ # of records: _____

yyyyDataQA.accdb

One DateTime for Results

Notes: _____

Combine Field and Lab Data

Table: _____ # of records: _____

Add Collector to Lab Data

Check Changes in Data due to JMP

Calibration Sheet review

File: _____

of sampling days: _____

of missing sheets: _____ # of records removed: _____

Table: _____

of records: _____

AMSData_be.accdb

Backup Results Table

Notes: _____

Table: _____

Link Combined Field And Lab Data Table

Append Data into Main Results Table

Original # of results: _____

of results Added: Total: _____

NCAMBNT: _____

NCSPST: _____

Final # of results: _____

Other Comments: _____

Review Completed Date: _____ by: _____

AMS Field and Lab Data to Main Results Database

Data QA

(C:\AMS Everything Useful\ Data Review\yyyy\yyyyData QA.accdb)

Check for one datetime for both lab and field data

Open query **qryCompareDateTime_Lab-Field** in design view.

Add both the new lab and field data tables to query- Query Tools>Design Tab>ShowTable.

Create relationships between the tables to include strStation(Field) = Station(Lab), strVisitID(Field) = VisitID(Lab), and Station(Lab) = strStoretNumb(tblStation).

Change table sources in query fields to match new tables and then remove old tables from query.

****Make sure you have changed all applicable columns or you may end up losing a column when you remove the old tables.**

!Run query. This query will let you know which date times do not match in both the field and lab data.

Check all “!!!” entries for the correct values. This will require reviewing field data and lab sheets.

Common errors are:

Wrong date on lab sheet- can look at receiving date if there is a question

Wrong date in field data- monitor sampled on different date than originally planned or miskeyed data.

Correct any mistakes.

To get minimum time for both Field and lab data – add a field for MinDateTime:

iif([DateTime]< [dtmDateTime], [DateTime], [dtmDateTime]) Save as a table.

Create an update query to update all the data (field and lab) to the minimum value.

Combine Field and Lab data

Copy Lab data table and change name of table to **tblyyyy_month-month** (ex. tbl2011_Jan-Apr).

Add a field for Collector to new table (**tblyyyy_month-month**). Save table.

Create an append query to append the field data(**tblyyyyField_month-month**) to table **tblyyyy_month-month**. The field types will need to match in both tables.

!Run query- will ask if you want to append to table- click **yes**.

Add Collector to Lab data

Create a make-table query with unique values for Visit ID, Station, DateTime, and Collector from field data table (**tblyyyyField_month-month**).

Name table- **tblyyyy_month-month_Unique** (ex. tbl2011_Jan-Apr_Unique).

!Run query.

Create an update query with Unique Value table (**tblyyyy_month-month_Unique**) and combined data table (**tblyyyy_month-month**).

Create relationships between the tables with VisitID field.

Select Collector field from **tblyyyy_month-month**- update to unique value collector field. Enter criteria- “is null” for the Collector field (updates only blank fields).

!Run query.

Samples without VisitIDs, dissolved metals, and QC samples will need to be updated manually.

Round depth field

JMP likes to change the number of decimal points for depth and results- may need to round fields- Create Update query- update depth field to round([depth_m],1)
!Run query

Calibration Sheet Review

Open query **qrySamplingDatesByRegion** in design view.

Add table **tblyyyy_month-month** to query- Query Tools>Design Tab>ShowTable.

Create relationships between the tables to include Station(combined) = strStoretNumb(tblStation).

Change table sources in query fields to match new table and then remove old table from query.

**Make sure you have changed all applicable columns or you may end up losing a column when you remove the old tables.

!Run query. This will provide a list sampling dates by collector for the time period reviewed.

Copy table to Excel and paste special as text.

Save as **yyyy_month-month_CalibrationCompare.xls** (ex. 2011_Jan-Apr_CalibrationCompare.xls).

Open Calibration database (S:\Calibration Resources\ Calibration Logs) and query **qryUniqueRegionCollectorDateMeter**. Enter dates start date and end date for time period of data review.

Copy and paste table into **yyyy_month-month_CalibrationCompare.xls** in columns next to the values from **yyyyData QA.mdb**. Go through spreadsheet and match entries. Add spaces to the appropriate fields when matching values are not included. This could be due to no calibration sheet for a sampling event or no AMS sampling event for a calibration sheet since the calibration database has all sampling events including AMS.

Review rows with blanks especially sampling events without calibration sheets. Contact regional monitors about missing calibration sheets and if available, add information to database and spreadsheet.

Once all available calibration sheets are entered, review the reports for DO, specific conductance, and pH.

When post-sampling checks were not completed, not within QC accept criteria, or no calibration sheet is available, then data for associated dates, stations and parameters are flagged in the comments field of **tblyyyy_month-month** with “to be removed”.

Review hard copy calibration sheets to verify failure.

Create a make table query with **tblyyyy_month-month**. Pull all fields and under the Comments field add the criteria “to be removed*”.

Name the new table – **tblyyyy_month-month_ToBeRemoved**.

!Run query.

Once the data have been added to the new table, change the query type to delete query.
!Run query to remove associated data from table **tblyyyy_month-month**.

AMS Database

(C:AMS Everything Useful\ AMS data\AMSDData_be.accdb

Backup Main Results Table

Copy the main Results table- **tblResults**

Save table. (example- tblResultspre2011JFMAData)

Import Combined Table

Export combined table **tblyyyy_month-month** as a tab delimited text file from
yyyyDataQA.accdb.

Import combined Field and Lab data table (**tblyyyy_month-month**) to database.

Append New Data to tblResults

Create an Append query- use the combined Field and Lab data table and tblCurrentVID.
May need to import or link tblCurrentVID to this database also. Connect the tables by
Visit ID and join properties to include all rows from combined Field and Lab data table
and only those in tblCurrentVID.

For agencycode column- the agency field will need to be created and assigned to
“NCAMBNT” or “NCSPST” depending on the criteria (see below). Add station number,
DateTime, depth, methodcode, result, remark, collector, comment fields from combined
field and lab data table. Match to fields in tblResults

From tblCurrentVID- add lngSamplingCode.

NCAMBNT criteria

Currently all data except Chronic Special Studies

NCSPST criteria

Station-

VisitID- is null

!Run query

Check tblResults for new results and correct formatting.