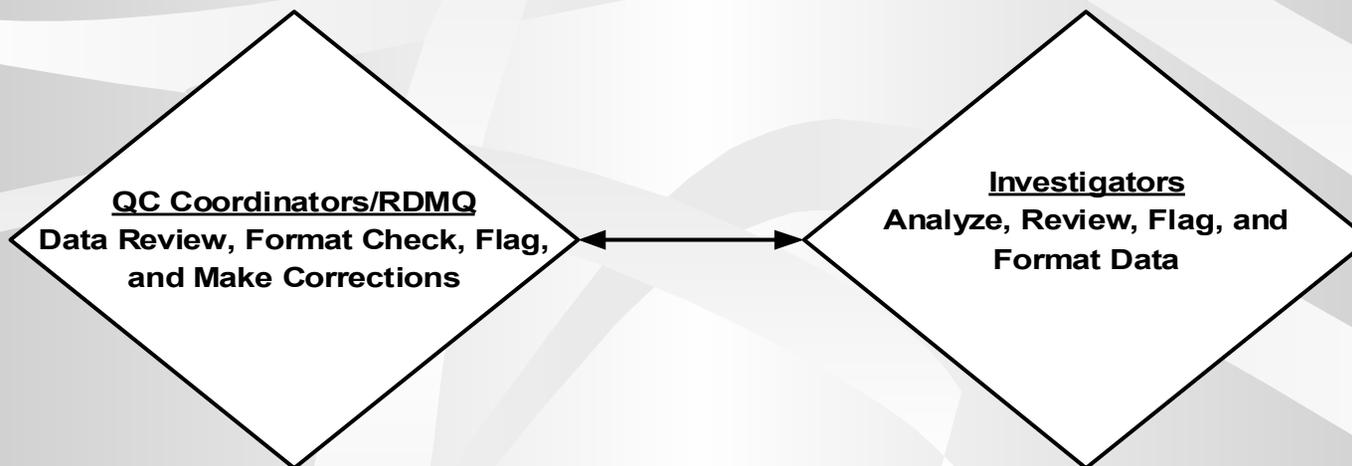


THE QA REVIEW OF THE LMMB DATA

THE PROCESS

Debra Piper

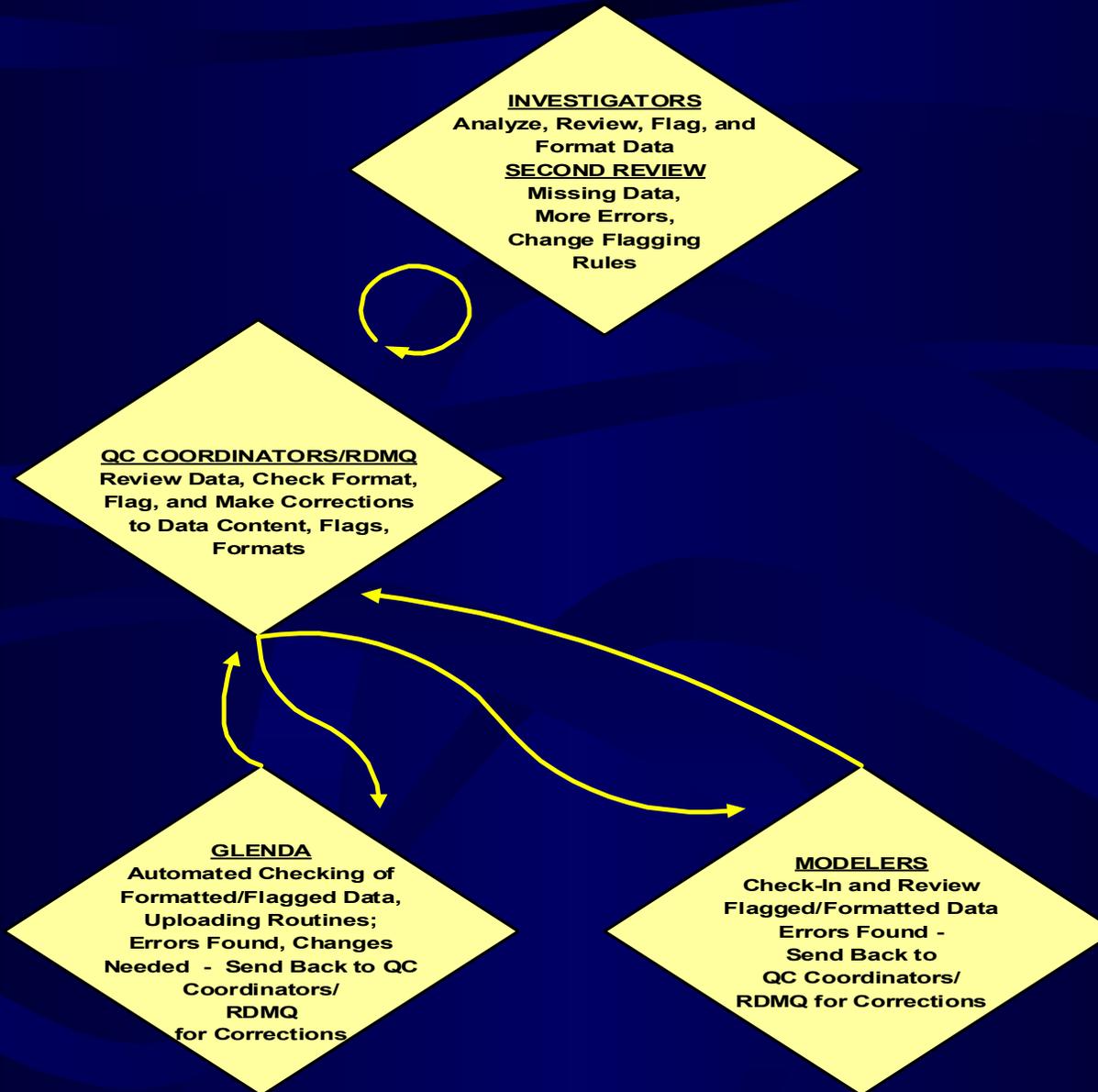
ORIGINAL PLAN FOR QA REVIEW OF LMMB DATA



OVERVIEW OF THE QA REVIEW PROCESS OF LMMB DATA



OVERVIEW OF THE QA REVIEW PROCESS OF LMMB DATA



WHAT GIVES OUR REVIEW PROCESS ITS POWER?

- Revisions of the data are allowed
- Everyone is involved; QC Coordinator Group, RDMQ, PIs, Project Officers, AMS/GLENDA, and the Modelers participate in the review of the data
- The information is shared between team members in a highly organized way

One Part of the Review Process- More Details

QC COORDINATORS/RDMQ
Review Data, Check Format,
Flag, and Make Corrections
to Data Content, Flags,
Formats

- Specifics of the review process:
 - Manual review
 - Automated review
- Organization at multiple levels

The Manual Review

- Check formats
- Check that codes are correct, 100% entered
- Check units, conversions correct
- Check for missing data, information
- Check for correct flagging, flag mismatches between laboratory and RDMQ applied flags
- Make decisions about invalid and high and low biased data

The Automated Review - RDMQ

- Linking of visit, field, complex, and lab files
- Extreme value checking
- Code and analyte checks
- Flag mismatches between lab and RDMQ applied flags
- RPD mismatches between RFS, FD_n, LD_n

The Organization of the Process

- Organized at Multiple Levels
 - Group
 - Individuals

Organization Tools

- Checklists
- Notes pages attached to data workbooks
- FTP sites
- Centrally located tracking system
- Rigid protocols for data storage and transfers
- Automated/standardized e-mails
- Many conference calls

PHASE 2 VERIFICATION CHECKLIST (Version 2)

Focus:
Data set#:
Lab File name:
Sample Collection File Name:
Station Visit File:
Complex File Name:

INORGANICS AND ORGANICS

- 2.1. Move LIS and LSS to AREMARKS
- 2.2. Remove any commas
- 2.3. Make RFS/FD1 Sample IDs the same, if cannot note on Traveler Form
- 2.4. Check date format: Lotus YY-MM-DD Numeric
- 2.5. Check time format: HH:MM:SS, NUMERIC, lab and field files
- 2.6. Check time sample collection file, GMT
- 2.7. BATCHID 100% entered, if not create/add batch IDs
- 2.8. SAMPID 100% entered, if not create/add sample IDs
- 2.9. Add significant figures to sigfig column
- 2.10. Check that all column entries are in correct character or numeric format in both the lab and field files
- 2.11. Enter RKEY formula, save RKEY entries as values
- 2.12. Delete any macros in the spreadsheet
- 2.13. Remove extra spaces in front of codes entries
- 2.14. Delete columns and rows to the side and below the records that contain entries

EXAMPLE OF NOTES

Notes

All Barks were missing RSTYPE and FRACT values

Some Results were missing WQL and WUNTS. These were made to match other entries: 20, and ml respa

NST samples originally had QODs of FDK. These were changed to LPC

BATCHIDs created for all samples by concatenating B+ "the numerical value of the AEDATE"

The "Missing Data" worksheet following the "Notes" worksheet contains results that are missing AEDATE

"Repeat Data" sheet contains two results that appear to be a re run of the same sample, over two batches

There are differing BCORFACT values within samples run in batches: 34805, 34824, 35137.

WHAT MAKES OUR REVIEW PROCESS WORK

- The data is reviewed by everyone from different perspectives
- The information is transmitted between team members in a highly organized way