

Meeting or Workgroup: Practical Quantitation Limitations Subcommittee

Meeting Date: Tuesday April 8, 2008, CDPHE- LSD

Attendees:

Laurie Peterson-Wright, CDPHE-LSD
Lyn Fitzgerald, Parsons
Dave Akers, WQCD
Andrew Todd, WQCC
Robert McFarland, RMP&JC
Bo Meyer, Xcel Energy
Amy Richards, Xcel Energy
Elizabeth Lemonds, CDHPS
Frank Johns, Tetra Tech
Sharon Henderson Davis, MWRD
Kevin Feeley, MWRD

Summary:

Laurie Peterson-Wright gave a brief overview of the workgroup's history.

- o Lab survey review
- o Data review – "high" labs thrown out
- o Organic review – NDMA issue

After reviewing the organics data, it was determined that lab reporting limits are higher than published limits. Close, but still higher.

Performance standard / WQ standard

- o Took the average (while disqualifying high)
- o Dixon's test for outliers for high and low
- o Average within the method
 - Robust methods had multiple labs
 - One lab is consistently higher

PQL mean Hg

Rounding Rule issues cause values to be above the performance standard. Significant figure issues – 3 or 5 s.f. Of the labs that responded the average stats show 3 greater than the performance standard.

– Averaging did not help with bringing labs within the Performance Standard.

PAHs, PCBs, pesticides – labs cannot get down to the performance standard when using the NPDES methods.

- Non-regular methods are listed but usually don't get to the standard.
- Another option was looking at minimum values. However, only one lab can do it. Then only one lab can run the analysis for all of the permitted dischargers.

Move the performance limits of labs in Colorado down to the standard – force labs to do better than the average and improving performance.

HMSWD – had a list of compounds, however they aren't in groundwater or stormwater

Compounds of interest to get closer to the standard – use another non-regular method. There have been leaps in technology.

PQL Study / PQL Guidance: discharge specific; perhaps a site specific PQL

What about background? Spiking in the lab may cause false positives, atmospheric background – perfumes, pesticides, re-asphalting

Using the average makes sense – pushes the labs to become efficient.
Using the minimum presents achievability issues.

In the Survey, the labs were not required to explain how MDLs were developed. Usually depend upon skill levels, instruments, best analyst, newest instrument, economics viability of having customers for the analysis.

Rounding Rules:

- 1 sig fig – multiply to 1 significant figure, round to 1, 2, 5 Therefore, 3 would be 5, which may cause the lab to be over the performance standard.
- 2 sig fig – 0, 5
- Most labs report to 2 places.
- 1 sig fig multiplied by 10 still have 1 sig fig.

Averaging is not related to the labs.

- averaging three labs PWL – 27; then the labs

Going to averages would throw rounding rules out. Statistically derive PQLs.
-- Where PQL wasn't met, used average to derive the lowest possible PQL.

EPA allows proof of modified methods – rounding to "instrument comfort"
-- 1 sig fig – is the lab reporting good information?

Rounding Rules –next survey require 2 sig figs

- Metals and organics
- Consider electronic submittal form – Access database
- Broaden the survey region; approved laboratory list

Lyn will calculate the averages and not round them.

Guidance Document – put in what we have now and update later. Version 1.1 will have organics, inorganics, and metals

Next meeting: [Full Group: Thursday, April 17, 2008 10:00 am at MWRD.](#)
Subcommittee: Wednesday May 14, 2008 8:30 am at CDPHE-LSD.

[Action Items (Responsible Person and Due Date)]:

Sharon will email the meeting summary to the group and post it to the website.