STATE OF CONNECTICUT

DEPARTMENT OF PUBLIC HEALTH
REGULATORY SERVICES BRANCH
ENVIRONMENTAL HEALTH SECTION
ENVIRONMENTAL LABORATORY CERTIFICATION PROGRAM

Date: May 1, 2006

To: Asbestos Laboratory Directors

From: Dermot Jones, Environmental Laboratory Consultant

Re: Asbestos laboratory inspections update – PCM QC requirements

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I have completed an on-site inspection for all the in-state asbestos labs, at least once since 2003 when we reestablished the schedule for inspecting these laboratories, and the 2.5 to 3 year inspection cycle is beginning again. I am taking this opportunity to send this letter in order to clarify the PCM QC requirements expected of asbestos laboratories and the records I intend to review when your laboratory is scheduled for the next regular inspection. I have been to a few laboratories already in this inspection cycle and it seems some of the same QC issues I cited as not being performed or inadequately performed are again at issue.

In an effort to resolve these QC issues prior to inspecting other laboratories, I would like to focus on 4 QC definitions three of which are defined in the 7400 method and the other I have become aware of since doing these inspections.

1) For each set of samples, <u>two</u> field blanks need to be submitted. The procedure for handling blanks is the same as that for handling the cassettes used to collect air samples. The Sampling section of the 7400 method states that the blank cassettes should be opened and put aside in a clean area at the same time samples are to be taken.

2) Approximately **10% of the sample workload** needs to be analyzed as blind recounts. The Calibration and Quality Control section 13 of the 7400 method defines the blind recount as a slide relabeled by someone other than the original counter then given back to the original analyst/counter to reread. The precision of the analyst's slide reading capability is evaluated from the results of reading the blind recount slide.

3) The Calibration and Quality Control section 13 defines the ranges that should be used to prepare reference slides.

Initially the reference slides are blinded to the analyst counting them and from the results obtained over time (minimally after 10 recounts of the reference slide) the intra

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and intercounter precision can be derived. Commercial samples need to be used to obtain reference slides in the ranges of <20, >20 to 50 and >50 to 100 fibers per 100 fields because the previously analyzed AATs, which laboratories use for their reference slides, are no longer available in these ranges. Previously analyzed AATs can be used as reference slides for the range of >100 fibers per 100 fields.

4) The replicate slide (a QC performed by at least a quarter of the labs) is a relabeled sample read by an analyst/counter who is different from the analyst that originally prepared the slide. This is a good evaluation of intercounter precision.

I expect to see records for analysis of the 2 blank cassettes, blind recounts and reference slides. It is my suggestion that each field analyst be given a set of multiple reference slides (different ranges of course) to read in the field. The set of reference slides should be sufficient enough so that by the time they need to be relabeled or replaced the analyst won't be too familiar with fiber count results obtained from reading them. The schedule for replenishing reference slides will vary from lab to lab (i.e. labs with a QC coordinator vs. the one to two man operations) but I need to know what the schedule is and see documentation that the schedule is followed.

Most laboratories are analyzing what I term a duplicate sample with each sample set. I recommend that the labs continue this practice. It is my suggestion that instead of just rereading a previously prepared slide for the duplicate analysis, the analyst should prepare another slide from one of the cassettes that make up the sample set and read that as the duplicate. By adopting this practice for the duplicate analysis I am hoping that this will resolve the confusion between duplicate analyses and blind recounts.

Replicate analyses are optional but I am inclined to allow for a combination of blind recount and replicate analyses that can be used to meet the 10% criteria for analysis of QCs.

I welcome any comments you may have in regard to this letter.