

DCLS and DEQ Mercury Meeting
Division of Consolidated Laboratory Services
Richmond, Virginia

Tuesday, February 26, 2002
10:00 a.m. – 1:00 p.m.

Attendees: DCLS

Norma Roadcap, Metals and Radiochemistry
Group Manager
Jim Anderson, Principal Scientist, Metals
Michelle Mouer, Senior Scientist, Metals
Lalie McDonald, Senior Scientist, Metals
Alan Messing, Environmental Scientist

DEQ

Don Kain, VRO Water
Compliance & Monitoring Mgr.
Bill Van Wart, VRO Biologist
Ted Turner, Env. Specialist

Charlie Morgan and Gary Du of DEQ were invited but were unable to attend the meeting.

Welcome/Announcements/Introductions – Norma Roadcap welcomed the participants and reviewed housekeeping issues. Self-introductions were made by all.

Overview of Analytical Mercury Methods, Current and New - Jim Anderson provided a review of methods, detection levels, and media for which DCLS can conduct mercury analyses. Jim also provided an informative history of his and DCLS' involvement in South River mercury work over the last 20-25 years, along with a brief history of changes that have occurred in analytical methods for mercury. Current costs for fish, water, and sediment samples were also discussed.

Jim also shared information on a new instrument the lab is hoping to acquire. This instrument provides speciation of the various organic fractions of mercury at very low QLs for water, tissue, and sediments. Estimated cost of the instrument is \$50,000.00.

DEQ Project/Task Description for Year 2002 - Don Kain, Bill Van Wart, and Ted Turner outlined DEQ's needs for the year 2002 for fish and water samples. Issues included anticipated numbers of samples, scheduling and delivery of samples, and data quantity and quality needs. Specific details have been outlined in DEQ's Quality Assurance Project Plans for each media. These documents have been shared with DCLS in draft form, and final copies will be provided in the near future.

Fish. Approximately 650 fish samples will be delivered to the lab, beginning in April 2002. Numbers to be delivered, along with specific timing, will be worked out between DEQ and DCLS. DEQ also informed lab personnel that some fish samples will arrive at the lab with heads and gut contents missing, as a result of a parallel research study being conducted on the fish specimens. Since DCLS will be removing only the fillet portions from the fish samples for mercury analyses, the prior removal of heads and gut contents should not affect mercury concentrations. It is expected that fillets removed by lab staff will not have been penetrated (i.e., no broken skin) or otherwise damaged during the field removal of heads and gut contents.

Water. DEQ intends to continue bimonthly sampling using clean methods for total and dissolved mercury at about 12 sites for at least the remainder of 2002. In addition, a one-time sampling event, using the same methods, will be conducted sometime during the year at 15-20 stations. Finally, DEQ is considering an intensive sweep of a 1.0 – 1.5 mile reach of the South River, resulting in possibly

50-75 samples for dissolved and total mercury using clean methods. DCLS staff said the lab should be able to accommodate all samples, as long as DEQ provides adequate advance notice.

Virginia Tech Project – Don Kain outlined a project being conducted by Virginia Tech in which the University will be seeking mercury analyses (total and methyl) for tissue samples from fish prey organisms. Examples of organisms which may be targeted include crayfish, minnows, and various invertebrates. Don asked if the lab might be able to homogenize and analyze samples of these target organisms, much as they would for composite samples of whole fish. DEQ and Virginia Tech are hoping that DCLS can do this work, so that there is direct comparability between the analyses for the two organizations' data. Jim Anderson provided general information on sample quantities needed by the lab. DCLS staff did not commit to running these samples, but said they would look into the feasibility of analyzing the various types of tissue. Norma Roadcap was not sure if DCLS is authorized to perform analyses directly for an entity such as Virginia Tech, due to potential conflict of interest issues. She will look into this.

Project/Task Organization - Norma Roadcap outlined project organization and responsibilities for the upcoming DEQ / DCLS mercury projects for fish and water.

- Project Manager – Don Kain
- DEQ Quality Assurance Officer – Gary Du
- Field Technical Staff – Various DEQ staff, including those at this meeting
- Metals Laboratory Manager – Norma Roadcap
- Metals Quality Assurance Officer – Michelle Mouer
- Laboratory Technical Staff – Jim Anderson, Lalie McDonald, Michelle Mouer, Charlotte Crewe, Scott Evans, and George Tunstall

Quality Objectives/Quality Control Requirements - Don Kain indicated that DEQ's data quality objectives and QC requirements would be identical to those from our 1999 fish sampling program. The details are outlined in the respective QA Project Plans for fish and water samples to be collected during 2002.

Discussion of Any Available Funding Sources via DEQ – Lab staff are interested in obtaining an instrument that will provide low level mercury analyses (<1.0 parts per trillion) and will also provide speciation of organic forms of mercury at these low levels for water, tissue, and sediments. Cost of this instrument is estimated at \$50,000.00. The current laboratory budget will not support this purchase, however. Since DEQ would be a major client for this instrument, DCLS staff indicated that they would be receptive to the possibility of funding support from DEQ. Another funding option was the possibility of increasing analytical costs to the degree that DCLS' clients would bear the cost of the instrument over time.

Metals Laboratory Tour - Jim Anderson and Norma Roadcap provided a tour of the metals laboratory for the DEQ guests.

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