Michael F. Easley, Governor

William G. Ross Jr., Secretary
North Carolina Department of Environment and Natural Resources

Alan W. Klimek, P.E., Director
Division of Water Quality

August 12, 2003

Subject: NPDES Mercury Requirement- EPA Method 1631
Additional Information

Dear NPDES Permittee:

In a previous letter dated August 30, 2002, your facility was notified of being subject to a new low-level mercury analysis (EPA Method 1631) for NPDES monitoring requirements, **beginning September 1, 2003**. The notification letter was mailed to 155 subject facilities. Since that mailing, the Division has participated in several Mercury 1631 Workshops to provide the regulated community with information on the new analytical requirements and clean sampling recommendations. Based on comments received at these workshops, the following items are intended to clarify certain NPDES requirements for the 155 subject facilities.

1. Mercury Sampling and Compliance. It is recommended that facilities collect some effluent samples for Method 1631 analysis prior to the 9/1/2003 effective date, in order to gain experience with the recommended clean sampling techniques as well as the analysis requirements. NPDES compliance will be judged using the new method results beginning 9/1/2003.
2. What Samples are Subject to Method 1631. Beginning 9/1/2003, **all effluent samples** collected for mercury from the subject facility are required to perform low level mercury analysis. This includes effluent samples collected for any of the following requirements: a) monitoring specified in your "Effluent Limitations and Monitoring Requirements" page of your NPDES permit; b) monitoring specified in your NPDES Pretreatment Short Term Monitoring Plan (STMP) or Long Term Monitoring Plan (LTMP); and c) NPDES permit renewal requirements. The effluent samples must be analyzed by a laboratory certified by the Division for Method 1631, and effluent results must be submitted with the applicable monthly Discharge Monitoring Report (DMR).
3. Grab Sampling. The Environmental Protection Agency (EPA) currently recommends that mercury samples for Method 1631 analysis be collected as grab samples, since automatic composite samplers may be more subject to contamination. Therefore, the Division will allow permittees to collect single grab samples directly into lab-provided sample bottles for permit requirements, even though the NPDES permit may specify "composite" samples for mercury. The grab sample must be representative of the discharge.
4. Laboratory Reporting Level. Based on the Division's review of commercial laboratories currently performing Method 1631, a majority of labs were reporting a minimum level of quantitation (ML) of either 1.0 ng/l or less. The Division will require an ML of 1 ng/l beginning 9/1/2003, which is considered reasonable and economically achievable.
5. Field Blank Collection. Method 1631 requires that a minimum of one field blank accompany each set of samples collected from the same site at the same time. The field blank is used to identify contamination during sample collection and transport activities. If mercury is present in the field blank at levels that would compromise reliable measurement of mercury in the wastewater sample, you should assume that the effluent sample was contaminated during collection or transit, and you will need to eliminate any source of contamination that has been identified. The permittee shall report all effluent sample results on the applicable monthly DMR. If a field blank fails to meet quality control criteria, the permittee should note that fact in the DMR Comments Section, and append the lab sheet for that field blank. For those facilities sampling for mercury under a limited monitoring frequency (quarterly or less, such as Pretreatment LTMP/STMP monitoring), you must resample if the field blanks are outside quality control criteria. However, for those facilities with more frequent effluent monitoring requirements (i.e., monthly or more frequent), resampling is not required if field blank quality control criteria are not achieved for a given sample event. Refer to Method 1631, Revision E (Section 9.4.5.2- Quality Control- Field Blanks), for specific quality control criteria regarding field blank acceptability and effluent sample reliability.
6. Field Blank Subtraction. Method 1631 provides for subtraction of field blanks (provided they meet quality control criteria defined above) from the effluent sample result if deemed appropriate by a regulatory agency. Upon review, the Division will not allow field blank subtraction from effluent samples for reporting purposes. Based on a recent study using Method 1631 for wastewater samples collected at 38 wastewater treatment plants, field blank concentrations were generally below the method quantitation level. Therefore, beginning 9/1/2003, the permittee shall report the result of the effluent sample as provided by the certified lab, without field blank subtraction, on the monthly DMR submission. In the event of a mercury limits violation, the permittee retains the option to request remission of any penalty. If the permittee believes that the violation

resulted from background contamination as indicated by the field blank, the permittee will need to document that fact with field blank quality control data.

7. Sample Preservation/Holding Times. Samples for total mercury analysis by Method 1631 must be collected in tightly-capped fluoropolymer or glass bottles and preserved with BrCl or HCl within 48 hours of sample collection. The time to sample preservation may be extended to 28 days if a sample is oxidized in the sample bottle. Samples must be analyzed within 90 days of sample collection.

If you have any questions about the contents of this letter, please contact the applicable Division staff listed below:

Mercury Method:	Roy Byrd	919-733-3908, ext 213
Certified Labs for Method 1631:	Fred Bone	919-733-3908, ext 273
NPDES Permitting:	Tom Belnick	919-733-5083, ext 543
NPDES Compliance:	Vanessa Manuel	919-733-5083, ext 532
NPDES Pretreatment:	Dana Folley	919-733-5083, ext 523

Sincerely,

Original signed by Dave Goodrich for

Alan W. Klimek, P.E.

cc (hardcopy): CLANC, c/o Lew Hicks, Environmental Chemist Inc., 6602 Windmill Way, Wilmington, NC 28405
DWQ Regional Offices, Water Quality
cc (email): EPA Region 4, Madolyn Dominy, Marshall Hyatt
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DWQ Laboratory Section; Steve Tedder, Larry Ausley, Jim Meyer, Roy Byrd, Fred Bone
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NC League of Municipalities, Anita Watkins
NC Labs Certified for Method 1631e